

# ANATOMIC PATHOLOGY

C A T A L O

# G





## Dr. Bipin Gupta

PhD, MBA | Founder, CEO & CSO

Since our inception, we at Diagnostic BioSystems Inc. are committed to enhancing immunohistochemistry results by providing innovative anatomic pathology reagents and systems to improve the practice of every histopathologist. Our prime focus has always been to provide Quality Global products and exceptional customer service and support.

Diagnostic BioSystems provides cutting-edge in-vitro diagnostics to the anatomic pathology and histology market through direct sales in the domestic market and via international distributors to over 70 countries worldwide. Our product portfolio includes high quality primary and fluorescent antibodies (FITC conjugated), Fully automated slide Stainer, chromogens, detection kits, and a wide range of ancillaries.

The quest for excellence is a continuous commitment and we have been committed to helping pathologists solve their most difficult diagnostic clinical questions for more than 2 decades. This commitment has helped us in understanding current needs and future requirements to ensure utmost customer satisfaction with our timely and excellent customer service and support.

Our values represent our promise to our stake holders and we continue to relay and focus on **Global Quality** and **Reliability** by maintaining efficiency and discipline in all our processes and systems. We are known for our transparency with our customers, which has made us a **Trusted** name in the market place. We strive to bring new products to the market & consistently deliver value to stakeholders by implementing new ideas & technologies to meet unmet needs.

I take this opportunity to personally thank every one for their great contribution in growing Diagnostic Biosystems Inc.

With heartfelt gratitude,

Dr. Bipin Gupta

Primary Antibodies | Conjugated Antibodies | Detection Systems | Chromogens  
Antigen Retrieval | Ancillary Reagents | Special Stains | Instrumentation

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# SAVING LIVES IMPROVING HEALTH

## Our Mission:

Diagnostic BioSystems' focus is to provide high quality primary and fluorescent antibodies, detection chemistries, and a wide range of ancillaries and chromogens, complemented with automated IHC Stainers and backed by exceptional customer service and technical support. DBS has more than twenty years of experience in IHC assay development to help pathologists solve their most difficult diagnostic clinical questions.

## What We Do:

Diagnostic BioSystems' main focus is to provide high quality primary and fluorescent antibodies, detection chemistries, and a wide range of ancillaries and chromogens, backed by exceptional customer service and technical support. DBS has more than twenty years of experience in IHC assay development to help pathologists solve their most difficult diagnostic clinical questions.

## Manufacturing Accreditations:

Diagnostic BioSystems maintains the highest quality standards and is committed to customer service and support. This commitment is built on a quality system foundation.

Diagnostic BioSystems is an FDA registered medical device manufacturer, operating under FDA 21CFR Part820 Quality System Regulations and is a California Department of Public Health (CDPH) licensed Medical Device Manufacturing facility.

Our facility is also **ISO 13485:2016** Certified meeting Quality Management System International Standards. We manufacture IVD/CE marked medical devices for use in the European market.



# Antibodies



# Primary Antibodies

Diagnostic BioSystems offers a range of ready-to-use and concentrated antibodies optimized to provide high quality staining when used for immunohistochemical applications. Our rabbit monoclonals and polyclonals and mouse monoclonals offer enhanced specificity and sharp signals.

## Format And Pack Size :

**Concentrated Antibodies:** Designed for individuals who want to have more flexibility in their immunostaining protocols. Each antibody is thoroughly quality control tested to cGMP standards. A recommended dilution factor is provided with each antibody.

**Pack Size:** Concentrated antibodies are available in 0.1ml, 0.5ml and 1ml vials.

**Prediluted Antibodies:** These antibodies have been quality control tested and require no further dilution or titration.

**Pack Size:** Prediluted antibodies are available in 2ml, 6ml, 10ml and 25ml vials.

## Prediluted Antibodies Key:

PDM = Mouse Monoclonal | RMPD = Rabbit Monoclonal | PDR = Rabbit Polyclonal

## Concentrated Antibodies Key:

Mob = Mouse Monoclonal | RMAB = Rabbit Monoclonal | RP = Rabbit Polyclonal

## Prediluted Volume Key:

PDM/PDR/RMPDXXX-S = 2ml | PDM/PDR/RMPDXXX = 6ml | PDM/PDR/RMPDXXX-10 = 10ml

PDM/PDR/RMPDXXX-25 = 25ml

## Concentrated Volume Key:

Mob/RP/RMABXXX = 1ml | Mob/RP/RMABXXX-05 = 0.5ml | Mob/RP/RMABXXX-01 = 0.1ml


## Image Identification Key:

Mouse Monoclonal=  Rat=  Rabbit Monoclonal=  Rabbit Polyclonal= 


In Vitro Diagnostic=  Research Use Only= 

# Antibody Look-up Table


Antibody	Clone (Species)	Positive Control	Catalog No.	
			RTU	Conc.
A20 (A-12)	A-12	Lung carcinoma	PDM598	Mob598
Actin Alpha Smooth Muscle	1A4	Leiomyoma, Colon	PDM003	Mob001
Actin Sarcomeric	5C5	Leiomyoma, Colon	PDM099	Mob128
Actin Muscle	HHF35	Skeletal muscle	PDM002	Mob002
Adenovirus	M58+M73	Adenovirus infected tissue	Not available	Mob355
Adipophilin	DBM15.60	Adrenal gland	PDM534	Mob534
Adrenocorticotrophic Hormone (ACTH) - (AH26)	AH26	Pituitary	PDM583	Mob244
Albumin	Rabbit	Liver	Not available	RP046
ALK p80	5A4	Anaplastic Lymphoma	Not available	Mob416
ALK	4A4	Anaplastic large cell lymphoma	PDM566	Mob566
Alpha-1-Antitrypsin	Rabbit	Tonsil	PDR021	RP048
Alpha Actinin	EA-53	Skeletal muscle	Not available	Mob227
Alpha Fetoprotein	C3	Fetal liver	PDM057	Mob129
Amyloid A Component	mc1	Kidney	PDM118	Mob003
Amyloid Beta Protein	BAM-10	Brain, Amyloidosis	Not available	Mob410
Amyloid Precursor Protein (APP)	Rabbit	Brain	PDR178	RP123
Androgen Receptor	AR 441	Prostate carcinoma	PDM167	Mob245
Arginase 1	DBM15.12	Hepatocellular Carcinoma	PDM197	Mob484
ATRX	D-5	Pancreas	PDM600	Mob600
BAP1	2667	Breast Carcinoma	PDM603	Mob603
BAP1	C-4	Breast Carcinoma	PDM595	Not available
Bcl-10	151	Tonsil	PDM442	Mob442
Bcl-2 Oncoprotein	124	Tonsil	PDM016	Mob005
Bcl-2 Oncoprotein	100/D5	Tonsil	PDM209	Mob130
Bcl-6 Oncoprotein	PG-B6	Tonsil	PDM587	Mob587
Beta Catenin (p120 Catenin)	DBM15.55	Breast carcinoma	PDM529	Mob529
Beta Catenin	Rabbit	Breast carcinoma, Large intestine	PDR060	RP080
BOB.1	SP92	Tonsil	RMPD110	RMAB110
BRCA1	GLK-2	Ovarian carcinoma	Not available	Mob424
C4D	C4D204	Rejected Kidney	PDM184	Mob471
CA 125	OV185:1	Ovarian carcinoma	PDM323	Mob110
CA15-3/MUC1	DBMM1	Breast carcinoma	PDM549	Mob549
CA 19-9	C241:5:1:4	Colon carcinoma	PDM567	Mob109


Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
Cadherin 17		1H3	Colorectal Carcinoma and normal colon	PDM604R	Mob604R
Cadherin Pan		CH-19	Tonsil	Not available	Mob228
Calbindin		CB-955	Kidney	Not available	Mob554
Calcitonin		Rabbit	Thyroid	PDR024	RP050
Calcitonin		SP17	Thyroid or medullary carcinoma	RMPD009	RMAB009
Caldesmon		hHCD	Endometrial cancer	PDM223	Mob556
Calponin		CALP	Breast	PDM219	Mob345
Calretinin (H-5)		H-5	Mesothelioma	PDM593	Mob593
Caspase 1		Rabbit	Placenta	PDR175	RP175
Caspase 3		3CSP03	Tonsil	Not available	Mob309
Caspase 3/PPP32		Rabbit	Tonsil	PDR172	RP096
Cathepsin D		Rabbit	Breast carcinoma, Prostate	PDR004	RP004
CD10		EP195	Tonsil, Follicular Lymphoma, Renal Cell Carcinoma	RMPD037	RMAB037
CD10 CALLA		56C6	Tonsil, Renal Cell Carcinoma	PDM107	Mob240
CD117/c-kit		Rabbit	Tonsil	PDR045	RP063
CD138		B-A38	Tonsil	PDM588	Mob588
CD138		EP201	Tonsil, Plasmacytoma	RMPD040	RMAB040
CD15		MMA	Tonsil	PDM127	Mob365
CD163		10D6	Tonsil	PDM579	Mob460
CD1a Cortical Thymocytes		O10	Tonsil	PDM173	Mob363
CD20 B-Cell		L26	Tonsil	PDM004	Mob004
CD21		1F8	Tonsil	PDM122	Mob028
CD23		1B12	Tonsil	PDM143	Mob294
CD23, B Cell		SP23	Tonsil	RMPD013	RMAB013
CD25 IL-2		IL2R.1	Tonsil	PDM144	Mob254
CD3		F7.2.38	Tonsil	PDM422	Mob422
CD3		SP7	Tonsil	RMPD005	RMAB005
CD3		LN10	Tonsil	PDM186	Mob474
CD3		Rabbit	Tonsil	PDR002	RP005
CD30 Ki-1 Antigen		Ber-H2	Hodgkin's lymphoma	PDM018	Mob032
CD31 (PECAM-1)		JC/70A	Tonsil	PDM020	Mob034
CD34		QBEND/10	Tonsil, Kidney	PDM050	Mob098
CD4		EP204	Tonsil	RMPD083	RMAB083
CD43 T-Cell		DF-T1	Tonsil	PDM060	Mob039
CD44 H Cam		156-3C11	Tonsil	PDM172	Mob256



Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
CD45 LCA		2B11+ PD7/26	Tonsil	PDM009	Mob040
CD45 RO T-Cell		UCHL-1	Tonsil	PDM015	Mob043
CD5		54/F6	Tonsil	PDM589	Mob589
CD5		SP19	Tonsil	RMPD011	RMAB011
CD56 NCAM-1		123C3.D5	Neuroblastoma	PDM110	Mob261
CD57 HNK-1		NK-1	Tonsil	PDM130	Mob163
CD61 Platelet Glycoprotein IIIa		Y2/51	Tonsil	PDM064	Mob164
CD63		NK-1/ C3 (same as MX 493129.5)	Melanoma	Not available	Mob301
CD68 Macrophage		KP1	Tonsil	PDM066	Mob167
CD68 Macrophage		PG-M1	Tonsil	PDM065	Mob094
CD7		CBC.37.80	Tonsil	PDM599	Mob599
CD74 B-Cell		LN2	Tonsil	PDM033	Mob168
CD79a B-Cell		HM47/A9	Tonsil	PDM125	Mob242
CD79a B-Cell		HM57	Tonsil	PDM271	Mob118
CD8 T-Cell		144B	Tonsil	PDM094	Mob117
CD8, T Cell		SP16	Tonsil	RMPD012	RMAB012
CD99		HO36-1.1	Ewing's sarcoma	PDM106	Mob262
CDC25A		DCS-120	Tonsil	Not available	Mob337
CDX2		EP25	Colon Colon Adenocarcinoma	RMPD059	RMAB059
CEA		COL-1	Colon carcinoma	PDM005	Mob008
HER2/neu (c-erbB-2)		SP3	Breast carcinoma	RMPD008	RMAB008
HER2/neu (c-erbB-2)		Rabbit	Breast carcinoma	PDR003	RP006
Chromogranin A		LK2H10	Pancreas	PDM067	Mob048
Chromogranin A		Rabbit	Pancreas	PDR061	RP008
Chromogranin A		SP12	Pancreas	RMPD015	RMAB015
Chorionic Gonadotropin (hCG)		Rabbit	Placenta	PDR030	RP007
CMV Cocktail		DDG9 + CCH2	Infected lung	PDM075R	Mob049R
C-myc		9 E10	Breast carcinoma	PDM211	Mob231
Collagen IV		COL-94	skin	PDM276	Mob229
COX2		Rabbit	Lung and colon carcinoma	PDR111	RP111
Cyclin D1		EP12	Breast carcinoma	RMPD106	RMAB106
Cyclin D1		SP4	Breast carcinoma	RMPD003	RMAB003
Cyclin E Protein		HE12	Breast carcinoma	PDM145	Mob266

Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
Cytokeratin (45 46 56.4 kb)		MNF116	skin	PDM116	Mob052
Cytokeratin (CAM5.2)		CAM5.2	Lung, Colon, prostate and breast tissue	PDM181	Mob469
Cytokeratin 13		KS-1A3	skin	Not available	Mob443
Cytokeratin 14		LL002	skin, Squamous Cell Carcinoma	PDM138	Mob186
Cytokeratin 15		LHK15	skin	PDM596	Mob305
Cytokeratin 16		LL025	skin, Squamous Cell Carcinoma	PDM273	Mob273
Cytokeratin 17		E3	skin	PDM206	Mob127
Cytokeratin 18		DC-10	skin	PDM164	Mob187
Cytokeratin 19		A53-B/A2.26	Tonsil, skin	PDM192	Mob274
Cytokeratin 20		Ks20.8	Skin, Colon Carcinoma	PDM049	Mob123
Cytokeratin 5		XM26	skin	PDM139	Mob361
Cytokeratin 5 & 14		XM26 & LL002	Skin Tonsil	PDM140	Mob433
Cytokeratin 5/6		D5/16 B4	skin	PDM123	Mob362
Cytokeratin 7		OV-TL 12/30	skin, Lung	PDM097	Mob057
Cytokeratin 7		LP1K	Tonsil	PDM563	Mob563
Cytokeratin 8		35bH11	skin, Colon	PDM117	Mob054
Cytokeratin 8/18		5D3	skin	PDM070	Mob189
Cytokeratin AE1, Acidic		AE1	Squamous Lung Carcinoma	PDM043	Mob092
Cytokeratin AE1+AE3		AE1+AE3	Squamous Lung Carcinoma	PDM072	Mob190
Cytokeratin AE1+AE3+8/18		AE1+AE3+5D3	Squamous Lung Carcinoma	PDM601	Not Available
Cytokeratin AE3, Basic		AE3	Squamous Lung Carcinoma	PDM044	Mob093
Cytokeratin H.M.W.		34bE12	skin, Prostate	PDM074	Mob059
Cytokeratin Wide Spectrum		Rabbit	skin	PDR035	RP010
Cytokeratin, Pan		Rabbit	Adeno Colon	PDR167	RP167
Desmin		D33	Leiomyoma	PDM006	Mob060
Desmin		DE-R-11	Leiomyoma	PDM610	Mob610
DOG1.1		DOG1.1	Gastrointestinal stromal tumor tissue	PDM170	Mob466
E2F-1 Transcription Factor		KH95	Tonsil, Breast carcinoma	Not available	Mob381
EBV Cocktail		CS1, CS2, CS3, CS4	Infected lymphoblastoma	PDM128	Mob194
E-Cadherin		SPM471	Breast carcinoma, Colon carcinoma, Appendix	PDM182	Mob550
EGFR		31G7	Breast carcinoma, Placenta	PDM226	Mob461

Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
Elastin		BA-4	Heart, Kidney	PDM300	Mob230
EMA		E29	Breast carcinoma	PDM204	Mob401
Epithelial Antigen		Ber-EP4	Breast carcinoma, Kidney	PDM131	Mob406
Epithelial Antigen		VU-1D9	Breast carcinoma	PDM077	Mob062
ERCC1		8F1	Tonsil	PDM151	Mob336
ERG		EP111	Prostate carcinoma	RMPD034	Not available
Estrogen Receptor		6F11	Breast carcinoma	PDM048	Mob121
Estrogen Receptor (ER)		SP1	Breast carcinoma	RMPD001	RMAB001
Ezrin/p181/Cytovillin		3C12	Lung	Not available	Mob380
Factor VIII		F8/86	Tonsil	PDM019	Mob196
Factor VIII R Antigen		Rabbit	Tonsil	PDR014	RP012
Factor XIIIa		Rabbit	Placenta	PDR054	RP103
Factor XIIIa		AC-1A1	Placenta	PDM141	Mob321
Fascin-1		55k-2	Ovary, Hodgkin s lymphoma	PDM560	Mob560
Fibronectin		Rabbit	Kidney	PDR170	RP013
Flk-1		Rabbit	Angiosarcoma	PDR171	RP076
FIt-1		Rabbit	Angiosarcoma	Not available	RP077
Galectin-3		H-5	Prostate, Colon Ca	PDM541	Mob541
Gastrin		Rabbit	Stomach	PDR027	RP044
GATA3		L50-823	Breast carcinoma, Urothelial Carcinomas	PDM564	Mob564
GCDFP-15		DBM15.52	Breast carcinoma	PDM261	Mob526
GFAP		Rabbit	Brain	PDR028	RP014
Glial Fibrillary Acidic Protein (GFAP)		GA5	Brain	PDM008	Mob064
GLUT-1		Rabbit	Breast carcinoma	Not available	RP128
Glycophorin A		JC159	Tonsil, Placenta	PDM124	Mob066
Glycophorin C		Ret40f	Tonsil	PDM578	Mob067
Glypican-3		YP7	Thyroid carcinoma, Hepatocellular carcinoma	PDM561	Mob561
Granzyme B		Rabbit	Tonsil	PDR050	RP105
Hairy Cell Leukemia		DBA.44	Tonsil	PDM024	Mob200
Heat Shock Protein 70		W27	Breast carcinoma	PDM597	Mob269
Helicobacter Pylori		DBM15.75	Infected stomach	PDM559	Mob559
Helicobacter Pylori		Rabbit	Infected stomach	PDR169	RP169
Heliocobactor pylori		Rabbit	Infected stomach	PDR053	RP016
Hepatitis B Surface Antigen, HBsAg		5C3	Infected liver	PDM570R	Mob570R
Hepatocyte		OCH1E5	Liver	PDM162	Mob426

Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
Herpes Simplex Virus II (HSV II)		DBM15.69	Infected tissue	PDM542	Mob542
HSV I		Rabbit	Infected tissue	PDR032	RP018
HHV8		LN53	Karposi sarcoma	PDM395	Mob395
HLA-DR (β chain of DP, DQ & DR)		CR3/43	Tonsil	PDM082R	Mob069R
HPV16		CAMVIR-1	HPV type 16 infected cervix	PDM166	Mob394
HSV Type I and II Cocktail		Rabbit and DBM 15.69	Infected tissue	PDRM001	Not available
Anti-Isocitrate Dehydrogenase 1 (IDH1)-R132H		HMAb-1	Human Glioma tissue	PDM580R	Mob580R
Anti-Isocitrate Dehydrogenase 1 (IDH1)-R132S		SMab-1	Human Glioma tissue	PDM582R	Mob582R
Iba1		AIF1/1909	Spleen	PDM602	Mob602
IgA		Rabbit	Tonsil	PDR017	RP020
IgG		Rabbit	Tonsil	PDR018	RP023
IgM		R1/69	Tonsil	PDM053	Mob074
IgM		Rabbit	Tonsil	PDR019	RP024
Inhibin		R1	Ovary	PDM178	Mob435
INSM1 (A-8)		A-8	neuroendocrine tumor	PDM586	Mob586
Insulin		K36aC10	Pancreas	Not available	Mob234
Kappa Light Chain		Rabbit	Tonsil	PDR015	RP025
Kappa Light Chain		KP-53	Tonsil	PDM055	Mob544
Ki-67		Rabbit	Tonsil	PDR048	RP026
Ki-67 Antigen		SP6	Tonsil	RMPD004	RMAB004
KU (P70)		H-6	Tonsil	Not available	Mob557
Lambda Light Chain		Rabbit	Tonsil	PDR016	RP027
Laminin		4C7	skin	PDM568	Mob202
Lysozyme		Rabbit	Tonsil	PDR005	RP028
MCM7		MCM7/1466	Tonsil	PDM612	Mob612
Mammaglobin A		EPR 9092	Breast carcinoma	RMPD036	RMAB036
MART-1/Melan A		A103	Melanoma	PDM153	Mob277
Mast Cell Chymase		CC1	Tonsil	PDM159	Mob346
Mast Cell Tryptase		AA1	Tonsil	PDM160	Mob347
Melanoma		HMB45	Melanoma	PDM011	Mob079
Melanoma		PNL2	Melanoma	PDM213	Mob421
Melanoma Pan Cocktail		HMB45 + A103 + T311	Metastatic melanoma in lymph node	PDM146	Mob428
Mesothelin		YP158	Mesothelioma	RMPD107	RMAB107

Antibody	Clone (Species)	Positive Control	Catalog No.	
			RTU	Conc.
Mesothelioma	HBME-1	Mesothelioma	PDM134	Mob349
MGMT	MT3.1	Tonsil	PDM423	Mob423
Microphthalmia	D5	Melanoma	PDM168	Mob462
Mismatch Repair Protein 2, MSH2	DBM15.82	Tonsil	PDM585	Mob585
MLH-1	G168-15	Tonsil, Colon carcinoma	PDM148	Mob430
MMP-9	Rabbit	Breast carcinoma	Not available	RP066
MOC-31	MOC-31	Colon and Breast (Normal & Carcinomas)	PDM546	Mob546
MSH6	44	Tonsil, Colon carcinoma	PDM147	Mob429
Mucin 5AC	45M1	Stomach	PDM163	Mob357
MUC1/CA15-3	DBMM1	Breast carcinoma	PDM549	Mob549
MUM1 Protein	MUM1p	Tonsil	PDM420	Mob420
Myeloperoxidase	59A5	Tonsil	PDM551	Mob551
Myeloperoxidase	Rabbit	Tonsil	PDR049	RP053
MyoD1	5.2F	Rhabdomyosarcoma	PDM120	Mob278
Myogenin	F5D	Rhabdomyosarcoma	PDM158	Mob322
Myosin Skeletal (Fast)	MY32	Skeletal muscle	PDM085	Mob207
Napsin A	KCG1.1	Lung adenocarcinoma	PDM154	Mob463
Neurofilaments	2F11	Brain	PDM012	Mob080
Neuron Specific Enolase	VI-H14	Pancreas	PDM321	Mob212
Neuron Specific Enolase	Rabbit	Pancreas	PDR006	RP054
NKX2.2	DBM15.15	Ewing's sarcoma	PDM199	Not Available
NKX3.1	361	Prostate Ca	PDM569	Mob569
OCT 3/4	6847R	Seminoma	RMPD113	RMAB113
p16	JC2	Uterine cervical squamous cell carcinoma	PDM575	Mob575
p27 KIP1	DCS-72.F6	Colon carcinoma	PDM245	Mob281
p40	Rabbit	Prostate	PDR055	RP163
p504s	Rabbit	Prostate carcinoma	PDR046	RP134
p63/p504s Cocktail	DBR16.1/ Polyclonal	Prostate	PDRMP001	Not Available
Alpha-Methylacyl-CoA Racemase (AMACR)	13H4	Prostate carcinoma	RMPD078	RMAB078
p53	DO-7	Breast carcinoma	PDM013	Mob082
p57KIP2	57P06	Colon carcinoma	PDM205	Mob291
p63	DBR16.1	Tonsil, Squamous Lung Carcinoma, Prostate Ca, rnBreast Carcinoma	RMPD086	RMAB086
Pancreatic Polypeptide	Rabbit	Pancreas	Not available	RP030
Pan-TRK	Rabbit	Cerebral cortex tissue	PDR176	RP176

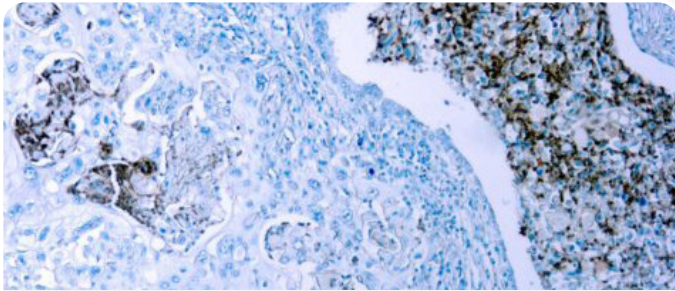
Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
PAX-8		4H7B3	Normal kidney, renal cell, or serous ovarian carcinomas	PDM180	Not available
PCNA		PC10	Tonsil	PDM014	Mob083
PD-1		EH33	Tonsil	PDM573	Mob573
PD-L1		405-9A11	Lung squamous Ca	PDM572	Mob572
Perforin		5B10	Spleen	PDM555	Mob555
Phosphohistone H3 (PHH3)		Rabbit	Melanoma	PDR168	RP168
PIN5 Cocktail		Rabbit	Prostatic intraepithelial neoplasia (PIN)	PDR057	Not available
PLAP		SP15	Placenta	RMPD017	RMAB017
PMS2		A16-4	Tonsil, Colon carcinoma	PDM171	Not available
Pneumocystis carinii		3F6	Infected lung	PDM584	Mob091
Podoplanin		D2-40	Tonsil	PDM558	Mob558
PRAME		EPR20330	Melanoma	RMPD109	RMAB109
Progesterone Receptor (PR)		SP2	Breast carcinoma	RMPD002	RMAB002
PSA		35H9	Prostate carcinoma	PDM548R	Mob548R
PSAP		PASE/4LJ	Prostate carcinoma	PDM037	Mob085
PTEN		6H2.1	Breast, Renal cell and Prostate carcinomas	PDM574	Mob574
Rad51		51RAD01	Testis	Not available	Mob324
Renal Cell Carcinoma		PN-15	Normal kidney or renal cell carcinoma	PDM169	Mob465
Retinoblastoma Protein		1F8	Colon carcinoma	PDM111	Mob220
ROS1		EPMGHR2	Lung carcinoma	RMPD108	Not available
RPA/p34		9H8	Tonsil	Not available	Mob329
S-100		SH-B1	Melanoma	PDM088	Mob111
S-100		4C4.9	Melanoma	PDM194	Mob377
S-100		Rabbit	Melanoma	PDR008	RP035
SALL4		6.00E+03	Seminoma	PDM591	Mob591
SATB2		EP 281	Colon Carcinoma	RMPD112	RMAB112
STAT6 – IVD (Outside Europe)		D-1	Solitary fibrous tumor	PDM605	Mob605
STAT6 – RUO (Europe)		D-1	Solitary fibrous tumor	PDM605R	Mob605R
Smad4		Rabbit	Colon Ca, Pancreas Ca	PDR173	RP173
Smooth Muscle Myosin		SMMS-1	Colon, Appendix	PDM175	Mob467
SOX10		20B7	Melanoma	PDM565	Mob565
SOX-10 (Melanoma Marker)		EP268	Melanoma	RMPD077	RMAB077
Synaptophysin (SYP02)		SYP02	Pancreas	PDM592	Mob399

Antibody	Click to view details 	Clone (Species)	Positive Control	Catalog No.	
				RTU	Conc.
Synaptophysin		SP11	Pancreas	RMPD018	RMAB018
TAG-72/CA 72-4		B72.3	Breast carcinoma	PDM100	Mob288
Tau (Neurofibrillary Tangles Marker)		Tau46	Alzheimer brain	Not available	Mob472
Tdt		SEN 28	Thymus	PDM096	Mob545
Thrombospondin		A6.1	Tonsil	Not available	Mob315
Thymidine Phosphorylase		P-GF.44C	Breast carcinoma	Not available	Mob292
Thyroglobulin		1D4	Thyroid	PDM576	Mob223
Thyroid Peroxidase		MoAb47	Thyroid	Not available	Mob418
TIMP-2		3A4	Colon carcinoma	PDM318	Mob318
TNF-Alpha		DBM15.28	Pancreas, Colon, Histiocytoma	PDM230	Mob502
TRAcP		DBM15.2	Spleen	PDM203	Mob490
Transglutaminase II		CUB 7402	Breast carcinoma	Not available	Mob353
Treponema Pallidum		2121	T. Pallidum Infected Tissue	PDM577	Mob577
TRPS1		EPR16171	Breast carcinoma	RMPD114	RMAB114
TTF-1 (Thyroid Transcription Factor-1)		8G7G3/1	Lung	PDM104	Mob285
Tyrosinase		T311	Melanoma	PDM150	Mob290
Uroplakin II & III Cocktail		AU1 and Rabbit Polyclonal	Bladder Ca.	PDRM002	RPM001
Uroplakin II (UPK2)		Rabbit Polyclonal	Bladder Ca.	PDR177	RP177
Uroplakin III (AU1)		AU1	Bladder Ca.	PDM594	Mob594
Vascular Endothelial Growth Factor(VEGF)		VG1	Angiosarcoma	PDM165	Mob308
Villin		1D2C3	Intestine	PDM590	Mob590
Vimentin		V9	Tonsil, Sarcoma	PDM029	Mob090
Wilms Tumor 1 Protein (WT1)		6F-H2	Wilms tumor	PDM177	Mob437
XRCC1		33-2-5	Testis	Not available	Mob325

## New Antibodies

New antibodies developed by Diagnostic BioSystems go through a rigorous development process to ensure the laboratory is provided the right tools for a highly technical, ever changing job. Our products and procedures are validated to the ISO 13485 medical device standard, ensuring lot-to-lot reliability and performance. At Diagnostic BioSystems, we take pride in the quality of our primary antibodies and stand by every product that is shipped from our facility to perform at the highest level of customer satisfaction.

NEW



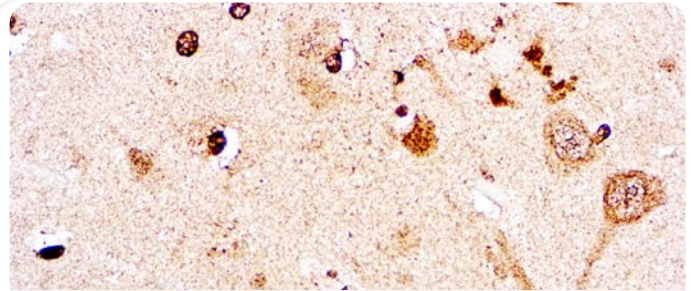
Formalin-fixed paraffin embedded human Lung Carcinoma stained with A20

### A20



<b>Catalog No.:</b>	Mob598 Concentrated PDM598 Prediluted
<b>Clone:</b>	A-12
<b>Immunogen:</b>	Raised against amino acids 1-100 of A20 of human origin
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Lung Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

A20 is induced by tumor necrosis factor (TNF) and interleukin 1 (IL-1), and acts as a negative regulator of nuclear factor kB (NFkB) gene expression. By inhibiting NFkB activation, A20 plays a critical role in terminating NFkB responses to various stimuli. A20 also interacts with several other proteins, such as TRAF2, TRAF6 and Ikb kinase (IKK) g protein, and can thereby inhibit cell death. Involved in the negative feedback regulation of signal transduction, A20 and A20-binding proteins may be useful as novel therapeutic tools in the treatment of a variety of diseases.



Formalin fixed paraffin embedded human brain stained with APP

### Amyloid Precursor Protein (APP)



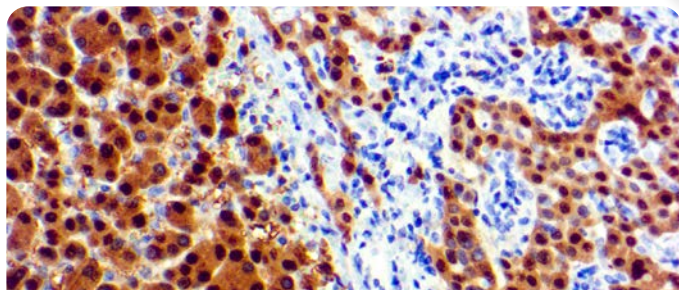
<b>Catalog No.:</b>	RP123 Concentrated PDR178 Prediluted
<b>Clone:</b>	Rabbit Polyclonal
<b>Immunogen:</b>	A synthetic peptide corresponding to C-terminal of human APP
<b>Positive Control:</b>	Brain
<b>Cellular Localization:</b>	Cytoplasmic, Extracellular

This antibody reacts with a 95-100 kDa protein. This antibody recognizes amyloid precursor proteins APP695, APP751 and APP770. Amyloid precursor protein and APP-like proteins are transmembrane glycoproteins with a similar modular domain structure.



- PAP pen is a special marking pen which is globally accepted and widely used.
- Ensures 100% hydrophobic barriers on the slides for your IHC needs.
- Designed to prevent wastage of valuable reagents.
- Ensures Antibody and detection systems within the target area.
- Can be used for immunostaining of paraffin sections, frozen sections, and for fluorescent antibody methods.





Formalin fixed paraffin embedded human hepatocellular carcinoma stained with Arginase 1

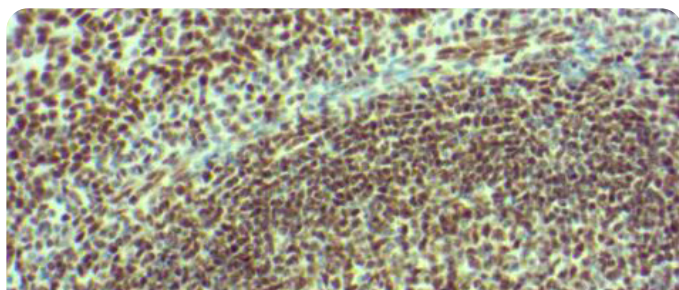
**Arginase 1**



<b>Catalog No.:</b>	Mob484 Concentrated PDM197 Prediluted
<b>Clone:</b>	DBM15.12
<b>Immunogen:</b>	Recombinant fragment (87 Amino acid residues around aa 1- 150) of human ARG1 protein
<b>Isotype:</b>	IgG3, kappa
<b>Positive Control:</b>	Hepatocellular Carcinoma (HCC)
<b>Cellular Localization:</b>	Cytoplasmic

Arginase is a manganese metallo-enzyme that catalyzes the hydrolysis of arginine to generate ornithine and urea. Arginase I and II are isoenzymes which differ in subcellular localization, regulation, and possibly function. Arginase I is a cytosolic enzyme, which is expressed mainly in the liver as part of the urea cycle, whereas arginase II is a mitochondrial protein found in a variety of tissues.

Antibody to ARG-1 labels hepatocytes in normal tissues and granulocytes in peripheral blood. ARG-1 is a sensitive and specific marker for identification of hepatocellular carcinoma.



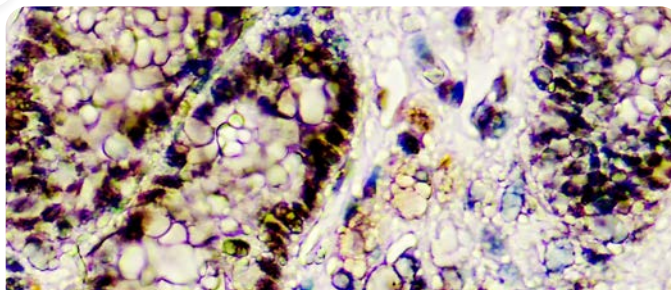
Formalin fixed paraffin embedded human pancreas stained with ATRX

**ATRX**



<b>Catalog No.:</b>	Mob600 Concentrated PDM600 Prediluted
<b>Clone:</b>	D-5
<b>Immunogen:</b>	Raised against amino acids 2193-2492 mapping near the C-terminus of ATRX of human origin
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

Alpha-thalassemia/mental retardation X-linked (ATRX) is a transcriptional regulator and Helicase that belongs to the Snf2 family of chromatin remodelling proteins. Mutations in the ATRX gene correlates with a high incidence of severe X-linked form of syndromal mental retardation associated with a thalassemia or ATRX syndrome.



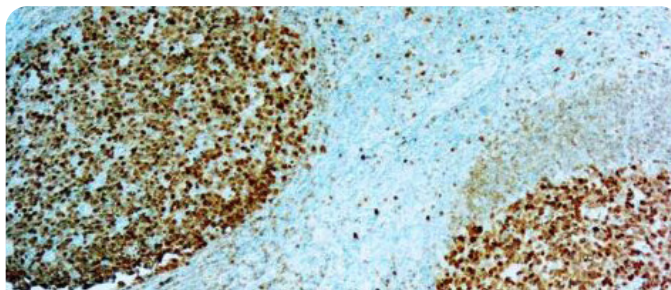
Formalin fixed paraffin embedded human breast carcinoma stained with BAP1

**BAP1**



<b>Catalog No.:</b>	Mob603 Concentrated PDM603 Prediluted
<b>Clone:</b>	BAP1/2667
<b>Immunogen:</b>	Recombinant human BAP1 protein fragment (aa191-aa326, exact sequence is proprietary)
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast Carcinoma
<b>Cellular Localization:</b>	Nuclear and Cytoplasmic

BAP1 (BRCA1-Associated Protein 1) was initially identified as a protein that binds to BRCA1. BAP1 is a tumor suppressor that is believed to mediate its effects through chromatin modulation, transcriptional regulation, and possibly via the ubiquitin-proteasome system and the DNA damage response pathway. BAP1 immunohistochemistry is particularly useful in differentiating malignant mesothelioma (nuclear negative) vs. reactive mesothelial proliferation (nuclear positive).



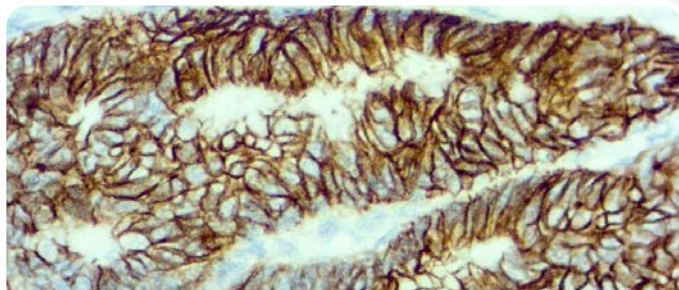
Formalin fixed paraffin embedded human Tonsil stained with BOB.1

**BOB.1**



<b>Catalog No.:</b>	RMAB110 Concentrated RMPD110 Prediluted
<b>Clone:</b>	SP92
<b>Immunogen:</b>	Synthetic peptide within Human BOB1 aa 200 to the C-terminus (C terminal). The exact sequence is proprietary
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

Transcriptional coactivator that specifically associates with either OCT1 or OCT2. It boosts the OCT1 mediated promoter activity and to a lesser extent, that of OCT2. It has no intrinsic DNA binding activity. It recognizes the POU domains of OCT1 and OCT2. It is essential for the response of B-cells to antigens and required for the formation of germinal centers.



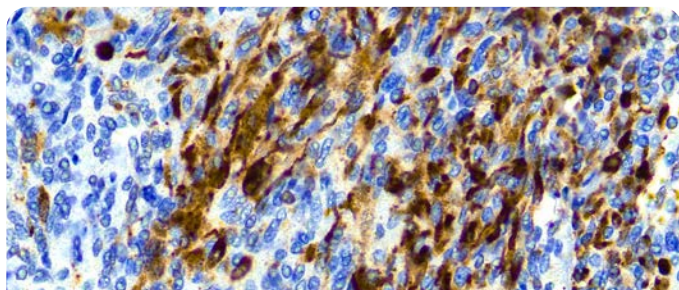
Formalin fixed paraffin embedded human colorectal carcinoma and normal colon stained with Cadherin 17

### Cadherin 17



<b>Catalog No.:</b>	Mob604R Concentrated PDM604R Prediluted
<b>Clone:</b>	1H3
<b>Immunogen:</b>	Recombinant human cadherin 17 protein fragment (aa 24 -aa 131)
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Colorectal Carcinoma and normal colon
<b>Cellular Localization:</b>	Membranous and cytoplasmic

Cadherin-17, also called liver-intestine cadherin, is a calcium-dependent transmembrane glycoprotein that mediates cell-cell adhesion in intestinal epithelium. In human, expression of cadherin-17 is limited to intestinal epithelial cells and is not found in the liver. Among normal tissues, the expression of cadherin-17 was limited to epithelial cells of small intestine and colon. It has been shown to be a useful marker for distinguishing between gastrointestinal adenocarcinoma and pancreatic adenocarcinoma.



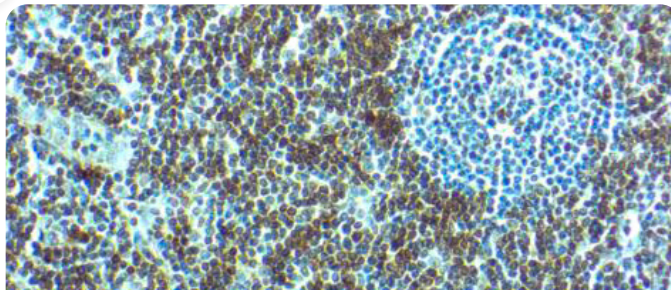
Formalin fixed paraffin embedded human Mesothelioma stained with Calretinin (H-5)

### Calretinin (H-5)



<b>Catalog No.:</b>	Mob593 Concentrated PDM593 Prediluted
<b>Clone:</b>	H-5
<b>Immunogen:</b>	specific for an epitope mapping between amino acids 2-27 at the N-terminus of Calretinin of human origin
<b>Isotype:</b>	IgG2b, Kappa
<b>Positive Control:</b>	Mesothelioma
<b>Cellular Localization:</b>	Cytoplasmic

Calretinin is an intracellular calcium-binding protein belonging to the troponin C superfamily characterized by a structural motif described as the EF-hand domain. The intensity of staining increases as the cerebellum matures. In tumors, calretinin has been detected in mesotheliomas and some pulmonary adenocarcinomas.



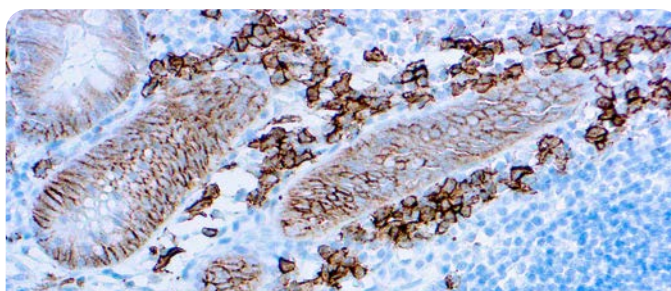
Formalin fixed paraffin embedded human tonsil tissue stained with CD7

### CD7



<b>Catalog No.:</b>	Mob599 Concentrated PDM599 Prediluted
<b>Clone:</b>	CBC.37.80
<b>Immunogen:</b>	a T lymphoblastoid cell line, established from a patient with acute lymphoblastic leukemia
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell surface/membrane

CD7 is expressed by most peripheral blood T cells, NK cells, and all thymocytes. It is one of the earliest surface antigens on T and NK-cell lineages. The antibody is a useful aid for classification of T-cell malignancies



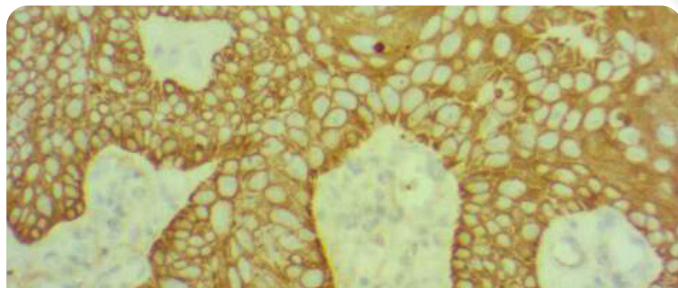
Formalin fixed paraffin embedded human tonsil tissue stained with CD138

### CD138



<b>Catalog No.:</b>	Mob588 Concentrated PDM588 Prediluted
<b>Clone:</b>	B-A38
<b>Immunogen:</b>	U266 cell line
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Membrane

CD138, also known as Syndecan-1, is a member of the transmembrane heparan sulfate proteoglycan family, acts as an extracellular matrix receptor and is involved in many cellular functions, including cell-cell adhesion and cell-matrix adhesion. CD138 expression is found in both hematopoietic and non-hematopoietic cells. In the hematopoietic system, CD138 labels plasma cells. It is an excellent marker for plasmacytic differentiation within the spectrum of hematologic malignancy. Among non-hematolymphoid cells, CD138 reactivity is observed in many types of epithelial cells and stoma cells in both normal and tumor tissues.



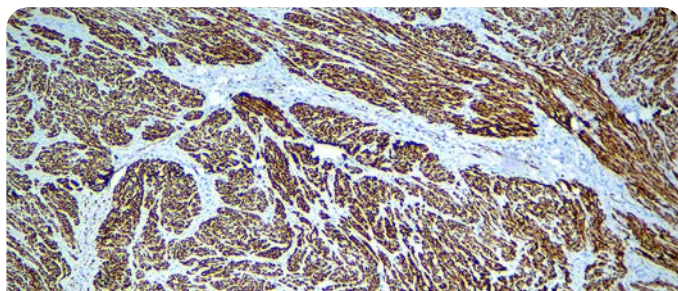
Formalin fixed paraffin embedded human tonsil tissue stained with CKAE1/AE3/8+18 cocktail

**Cytokeratin**



<b>Catalog No.:</b>	Mob601, Mob601-01, Mob601-05 - Concentrated PDM601 Prediluted
<b>Clone:</b>	AE1+AE3+ 5D3
<b>Immunogen:</b>	Human epidermal keratin +Cytoskeleton preparation from human breast cancer MCF-7 cells
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Squamous Lung Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

AE1/AE3 is a broad-spectrum anti pan-keratin antibody cocktail, which differentiates epithelial tumors from non-epithelial tumors e.g., squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer.



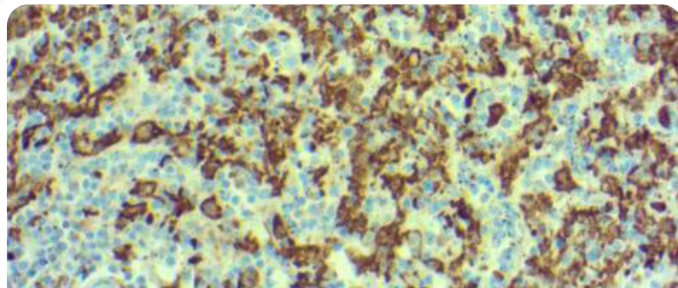
Formalin fixed paraffin embedded human Leiomyoma stained with Desmin (DE R 11)

**Desmin (DE-R-11)**



<b>Catalog No.:</b>	Mob610 Concentrated PDM610 Prediluted, PDM610-HL
<b>Clone:</b>	DE-R-11
<b>Immunogen:</b>	BALB/C mice were immunized with purified desmin from human muscle.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Leiomyoma
<b>Cellular Localization:</b>	Cytoplasmic

Desmin, a 469 amino acid protein found near the Z line in sarcomeres, is expressed more frequently in adult differentiated state tissues. Anti-desmin detects cells of normal smooth, skeletal, and cardiac muscles. Antibody reacts with leiomyomas, leiomyosarcoma, rhabdomyomas, rhabdomyosarcoma, and perivascular cells of glomus tumors of the skin.



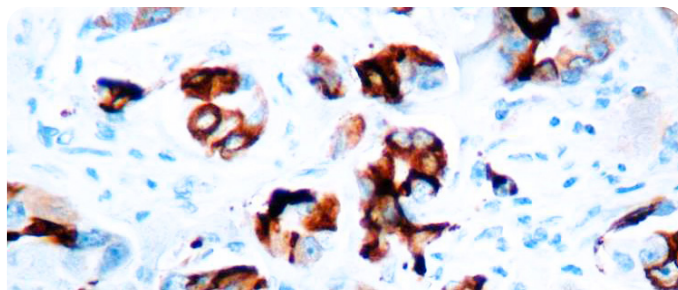
Formalin fixed paraffin embedded human spleen tissue stained with Iba1

**Iba1**



<b>Catalog No.:</b>	Mob602 Concentrated PDM602 Prediluted
<b>Clone:</b>	AIF1
<b>Immunogen:</b>	Purified fragment of human recombinant AIF1 protein (around aa 1-146) (exact sequence is proprietary)
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Spleen
<b>Cellular Localization:</b>	Cytoplasmic and Cell Surface

Actin-binding protein that enhances membrane ruffling and RAC activation. Enhances the actin-bundling activity of LCP1. Binds calcium. Plays a role in RAC signaling and in phagocytosis. AIF1 colocalizes with actin, and upon stimulation, translocates to lamellipodia. It is also a marker of human microglia and is expressed by macrophages in injured skeletal muscle.



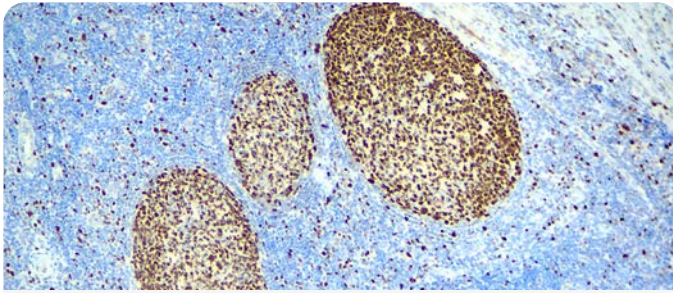
Formalin fixed paraffin embedded human breast stained with Mammaglobin-A

**Mammaglobin-A**



<b>Catalog No.:</b>	RMAB036 Concentrated RMPD036 Prediluted
<b>Clone:</b>	EPR9092
<b>Immunogen:</b>	A recombinant protein fragment corresponding to human Mammaglobin A
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

Mammaglobin-A is highly overexpressed in breast cancer cell lines and primary breast tumors. This pattern of expression is restricted to mammary epithelium and metastatic breast tumors. Thus, mammaglobin-A- specific T cell immune responses may provide an important approach for the design of breast cancer-specific immunotherapy.



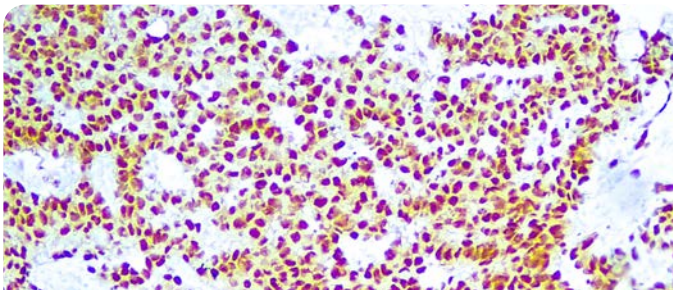
Formalin fixed paraffin embedded human Tonsil stained with MCM7.

**MCM7**




<b>Catalog No.:</b>	Mob612, Mob612R - Concentrated PDM612, PDM612R - Prediluted
<b>Clone:</b>	MCM7/1466
<b>Immunogen:</b>	Recombinant human MSM7 protein fragment
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

MCM7 is one of the highly conserved mini-chromosome maintenance proteins (MCM) that is essential for the initiation of eukaryotic genome replication. The MCM complex consisting of this protein and MCM2, 4 and 6 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. Cyclin D1-dependent kinase, CDK4, is found to associate with this protein, and may regulate the binding of this protein with the tumor suppressor protein RB1/RB.



Formalin fixed paraffin embedded human seminoma stained with OCT 3/4

**OCT 3/4**



<b>Catalog No.:</b>	RMAB113 Concentrated RMPD113 Prediluted
<b>Clone:</b>	OCT4/6847R
<b>Immunogen:</b>	Rabbit injected with synthetic peptide of human OCT-3/4 origin
<b>Isotype:</b>	IgG Kappa
<b>Positive Control:</b>	Seminoma
<b>Cellular Localization:</b>	Nuclear

OCT-3/4 (also known as POU5F1) is a transcription factor that has been recognized as fundamental in the maintenance of pluripotency in embryonic stem cells and primordial germ cells. It has been proposed as a useful marker for germ cell tumors (GCT) that exhibit features of pluripotentiality (seminoma/dysgerminoma, germinoma and embryonal carcinoma). OCT-3/4 immunostaining has been shown to be sensitive and specific for GCT, whether in primary gonadal or extragonadal sites or in metastatic lesions.



Formalin fixed paraffin embedded human Prostate stained with p63/p504s Cocktail.

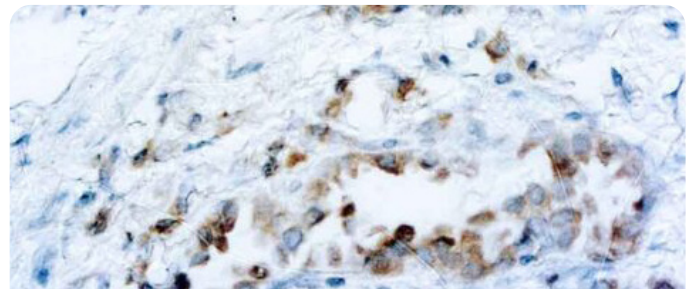
**p63/p504s Cocktail**





<b>Catalog No.:</b>	PDRMP001 Concentrated PDRMP001R Concentrated
<b>Clone:</b>	DBR 16.1/Polyclonal
<b>Immunogen:</b>	Recombinant human p63 protein fragment + Synthetic human AMACR peptide
<b>Isotype:</b>	IgG/N/A
<b>Positive Control:</b>	Prostate
<b>Cellular Localization:</b>	Nuclear and Cytoplasmic

p63 is a homolog of the tumor suppressor p53. p63 is selectively expressed by normal prostate basal cells and useful in the differential diagnosis of benign prostatic lesions and prostatic carcinoma. The expression of p504S protein is found in prostatic adenocarcinoma. It stains premalignant lesions of prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. P504S can be used as a positive marker for PIN.



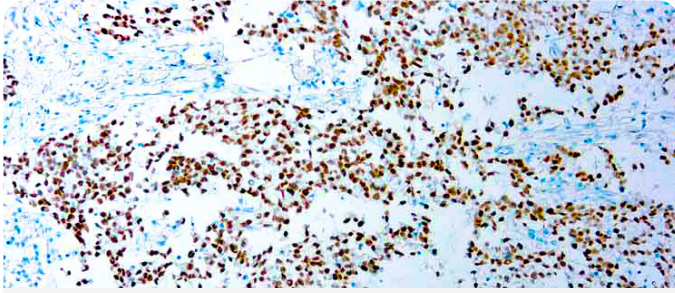
Formalin fixed paraffin embedded human Lung carcinoma stained with ROS1

**ROS1**



<b>Catalog No.:</b>	RMPD108 Prediluted
<b>Clone:</b>	EPMGHR2
<b>Immunogen:</b>	Synthetic peptide within Human ROS1 aa 2050-2150. The exact sequence is proprietary
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Lung carcinoma
<b>Cellular Localization:</b>	Diffuse Cytoplasmic

ROS1 rearrangements occur infrequently in lung ACA, however given the frequency of lung cancer in the population, ROS1-rearranged tumors represent a significant number of cancer patients. ROS1 gene rearrangements are reported in 1–2% of lung adenocarcinomas (ACA) and are associated with response to the multitargeted tyrosine kinase inhibitor, crizotinib. ROS IHC can be readily incorporated into the diagnostic surgical pathology workup of lung adenocarcinoma, with results confirmed by FISH as needed.

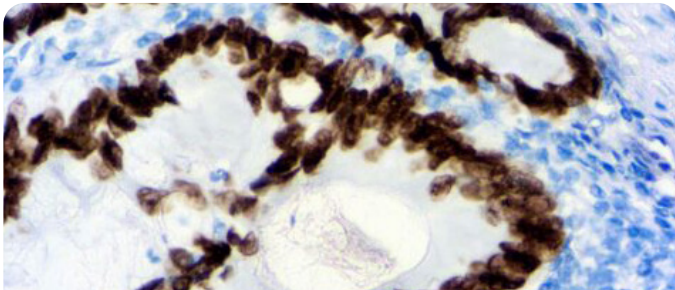


Formalin fixed paraffin embedded human seminoma stained with SALL4

**SALL4**  

<b>Catalog No.:</b>	Mob591 Concentrated PDM591 Prediluted
<b>Clone:</b>	6E3
<b>Immunogen:</b>	SALL4 (partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa)
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Seminoma
<b>Cellular Localization:</b>	Nuclear

Sal-like protein 4 (SALL4) is a zinc-finger transcription factor that serves as a master regulator of embryonic pluripotency and is involved in processes associated with stem cell activities. SALL4 expression in germ cells makes it a useful marker for germ cell tumors such as seminoma, embryonal carcinoma, yolk sac tumors and teratomas. SALL4 expression is also seen in the spermatogonia of normal testis.

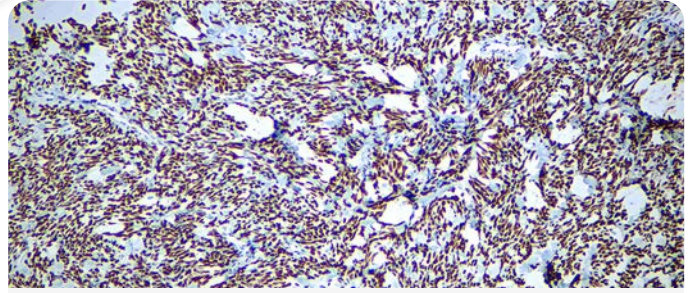


Formalin fixed paraffin embedded human colon carcinoma stained with SATB2

**SATB2**  

<b>Catalog No.:</b>	RMAB112 Concentrated RMPD112 Prediluted
<b>Clone:</b>	EP 281
<b>Immunogen:</b>	Synthetic peptide corresponding to human SATB2
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Colon Carcinoma
<b>Cellular Localization:</b>	Nuclear

Special AT-rich sequence-binding protein 2 (SATB2) is a recently described marker that functions as a nuclear matrix-associated transcription factor. It has been reported that SATB2, in combination with CK20, could identify almost all colorectal carcinomas, including poorly differentiated colorectal carcinomas.

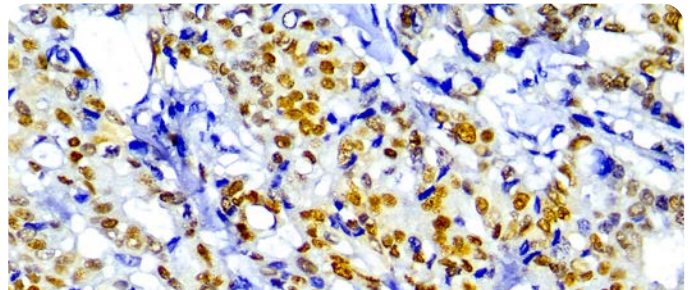


Formalin fixed paraffin embedded human Solitary fibrous tumor stained with STAT6

**STAT6 – Outside Europe** 

<b>Catalog No. IVD (Outside Europe):</b>	Mob605 Concentrated PDM605 Prediluted
<b>Catalog No. RUO (Europe):</b>	Mob605R Concentrated PDM605R Prediluted
<b>Clone:</b>	D-1
<b>Immunogen:</b>	A synthetic peptide corresponding to amino acids 799-823 at the C-terminus
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Solitary fibrous tumor
<b>Cellular Localization:</b>	Nuclear

Solitary fibrous tumor (SFT) is a fibroblastic neoplasm of variable biologic potential that can arise at a wide range of anatomic sites. Almost all cases of (98%) including conventional, cellular, atypical, and malignant variants showed nuclear expression of STAT6. Staining for STAT6 was usually diffuse: 68% of cases showed reactivity for STAT6 in 75% of tumor cells.

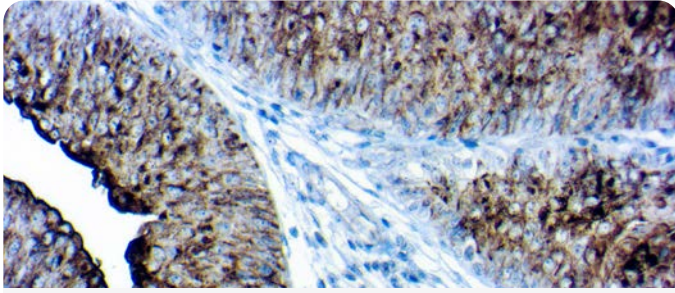


Formalin fixed paraffin embedded human Breast carcinoma stained with TRPS1.

**TRPS1**  

<b>Catalog No.:</b>	RMAB114 Concentrated RMPD114 Prediluted
<b>Clone:</b>	EPR16171
<b>Immunogen:</b>	Recombinant human TRPS1 protein fragment
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

TRPS1, Trichorhinophalangeal syndrome type 1, is a recombinant rabbit monoclonal antibody that helps in the identification of breast carcinoma, invasive or in situ. It provides good values in differentiating between primary and metastatic breast carcinoma in various body sites. It has been reported 1-4 that TRPS1 and GATA3 had comparable positive expressions in ER-positive (98% vs. 95%) and HER2-positive (87% vs. 88%) breast carcinomas.

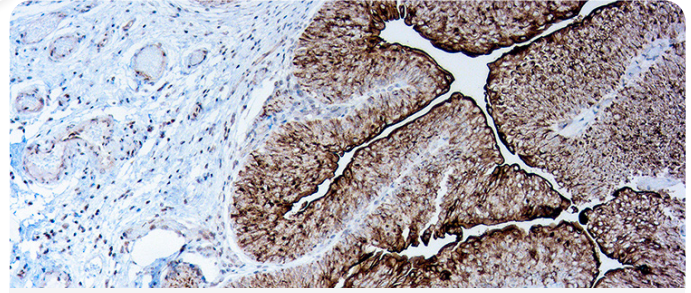


Formalin fixed paraffin embedded human Bladder Carcinoma stained with Uroplakin II & III Cocktail

**Uroplakin II & III Cocktail**   **IVD**

<b>Catalog No.:</b>	RPM001 Concentrated PDRM002 Prediluted
<b>Clone:</b>	AU1 and Rabbit Polyclonal
<b>Immunogen:</b>	UPII: Peptide-KLH conjugate, UPIII: Raised in mouse using AUM preparation from bovine urinary bladder as the immunogen
<b>Positive Control:</b>	Bladder Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Membranous

Uroplakins (UPs) are a family of transmembrane proteins (UPs Ia, Ib, II and III) that are specific differentiation products of urothelial cells. In non- neoplastic mammalian urothelium, UPs are expressed in the luminal surface plasmalemma of superficial (umbrella) cells, Uroplakin II/III cocktail is specific for tumors of urothelial origin and, when used in combination with other markers, can aid in the diagnosis of primary and metastatic tumors.

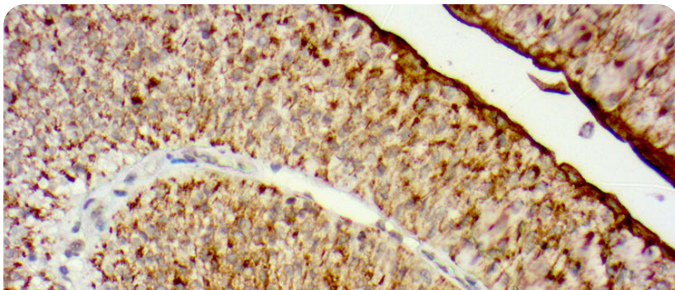


Formalin fixed paraffin embedded human Bladder carcinoma stained with Uroplakin III (AU1)

**Uroplakin III (AU1)**  **IVD**

<b>Catalog No.:</b>	Mob594 Concentrated PDM594 Prediluted
<b>Clone:</b>	AU1
<b>Immunogen:</b>	Raised in mouse using AUM preparation from bovine urinary bladder as the immunogen
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Bladder Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Membranous

Uroplakins (UPs) are a family of transmembrane proteins (Ups Ia, Ib, II and III) that are specific differentiation products of urothelial cells. UPIII is specific for tumors of urothelial origin and, when used in combination with other markers, can aid in the diagnosis of primary and metastatic tumors.

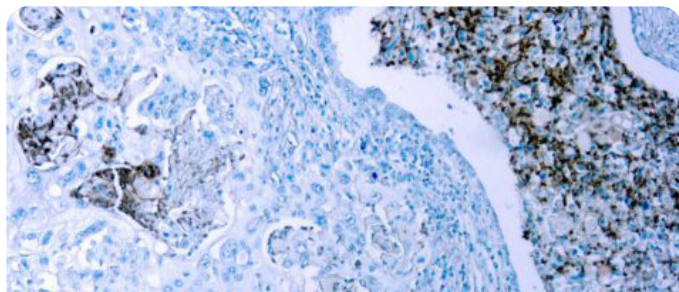


Formalin fixed paraffin embedded human Bladder carcinoma stained with Uroplakin II (UPK2)

**Uroplakin II (UPK2)**  **IVD**

<b>Catalog No.:</b>	RP177 Concentrated PDR177 Prediluted
<b>Clone:</b>	Polyclonal
<b>Immunogen:</b>	Peptide-KLH conjugate
<b>Positive Control:</b>	Bladder Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Membranous

Uroplakins (UPs) are a family of transmembrane proteins (UPs Ia, Ib, II and III) that are specific differentiation products of urothelial cells. Uroplakins are markers of terminally differentiated urothelium. Uroplakin II (UPII) is a newly described sensitive marker for urothelial carcinoma (UC). The expression profile of UPII in different types of UC and its utility in the diagnostic setting are needed.

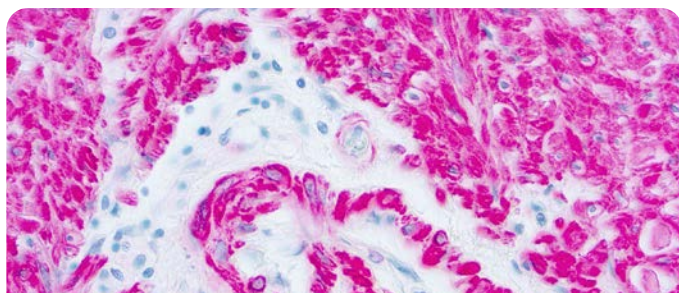


Formalin-fixed paraffin embedded human Lung Carcinoma stained with A20

**A20**  **IVD**

<b>Catalog No.:</b>	Mob598 Concentrated PDM598 Prediluted
<b>Clone:</b>	A-12
<b>Immunogen:</b>	Raised against amino acids 1-100 of A20 of human origin
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Lung Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

A20 is induced by tumor necrosis factor (TNF) and interleukin 1 (IL-1), and acts as a negative regulator of nuclear factor kB (NFKB) gene expression. By inhibiting NFKB activation, A20 plays a critical role in terminating NFKB responses to various stimuli. A20 also interacts with several other proteins, such as TRAF2, TRAF6 and IκB kinase (IKK) g protein, and can thereby inhibit cell death. Involved in the negative feedback regulation of signal transduction, A20 and A20-binding proteins may be useful as novel therapeutic tools in the treatment of a variety of diseases.

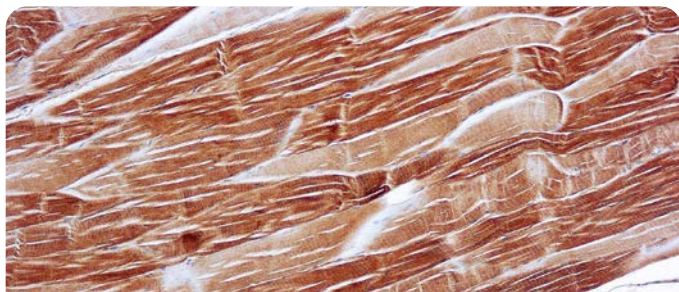


Formalin fixed paraffin embedded human large intestine stained with Actin, Smooth Muscle

**Actin, α-Smooth Muscle**  **IVD**

<b>Catalog No.:</b>	Mob001 Concentrated PDM003 Prediluted
<b>Clone:</b>	1A4
<b>Immunogen:</b>	BALB/C mice were injected with N-terminal decapeptide of α-smooth muscle actin.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Leiomyoma, Colon
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to α-smooth muscle isoform of actin. It reacts with smooth muscle cells of vessels and different parenchymes. This antibody does not cross-react with β and γ-cytoplasmic, α-sarcomeric and α-myocardial actin isoforms.

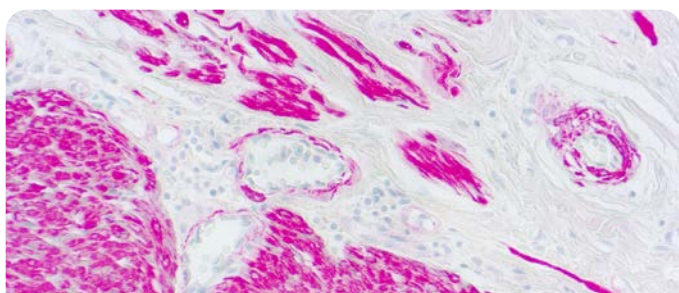


Formalin fixed paraffin embedded human skeletal muscle stained with Actin, Sarcomeric

**Actin, Sarcomeric**  **IVD**

<b>Catalog No.:</b>	Mob128 Concentrated PDM099 Prediluted
<b>Clone:</b>	5C5
<b>Immunogen:</b>	BALB/C mice were injected with purified rabbit striated muscle actin.
<b>Isotype:</b>	IgM
<b>Positive Control:</b>	Skeletal muscle
<b>Cellular Localization:</b>	Cytoplasmic

Monoclonal anti-α-sarcomeric actin has been used as a marker for rhabdomyosarcoma. This antibody is specific to α-skeletal and α-cardiac muscle actins. It does not react with smooth muscle tissue.

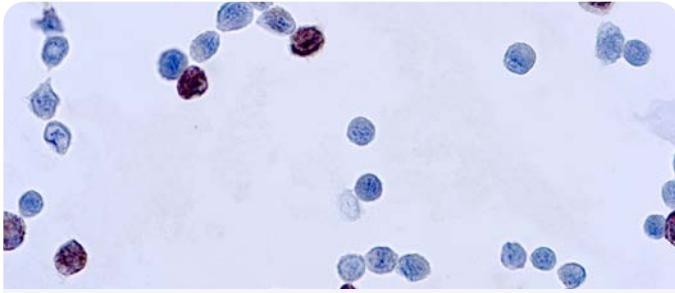


Formalin fixed paraffin embedded human large intestine stained with Actin, Muscle Specific

**Actin, Muscle Specific**  **IVD**

<b>Catalog No.:</b>	Mob002 Concentrated PDM002 Prediluted
<b>Clone:</b>	HHF35
<b>Immunogen:</b>	BALB/C mice were injected with SDS extracted protein from human myocardium.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Skeletal muscle
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to α and γ specific actin isomers from skeletal, cardiac and smooth muscle but does not recognize β and nonsmooth muscle γ actin isomers.

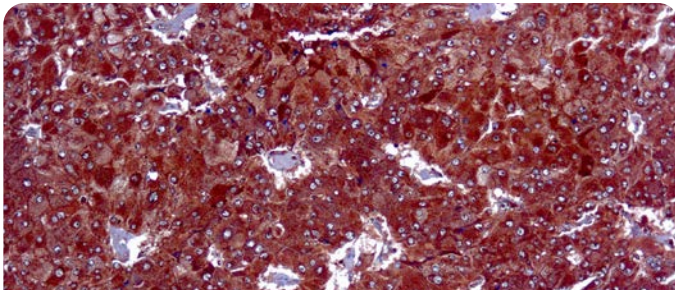


Formalin fixed paraffin embedded human adenovirus infected tissue stained with Adenovirus

**Adenovirus**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob355, Mob355R - Concentrated
<b>Clone:</b>	M58+M73
<b>Immunogen:</b>	BALB/C mice were injected with adenovirus.
<b>Isotype:</b>	M58, IgG2a, kappa; M73, IgG2a, kappa
<b>Positive Control:</b>	Adenovirus infected tissue
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with adenovirus. The adenovirus early gene product E1A is a potent stimulator of cellular proliferation, which when overexpressed can overcome the growth-inhibitory effects of TGF-β. The E1A region encodes a series of related proteins (35-46 kDa) with multifunctional capabilities and forms a specific complex with the retinoblastoma tumor suppressor gene product. The E1A and E1B regions together comprise the transforming region of adenovirus.

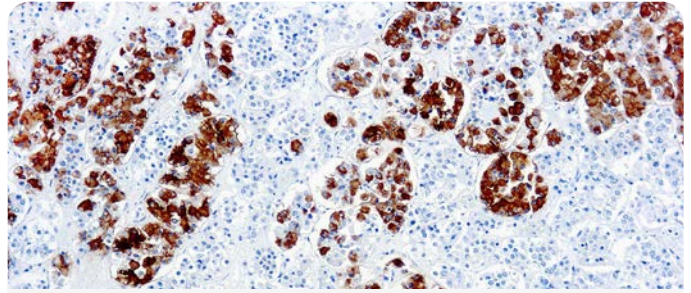


Formalin fixed paraffin embedded adrenal carcinoma stained with Adipophilin

**Adipophilin**  **IVD**

<b>Catalog No.:</b>	Mob534 Concentrated PDM534 Prediluted
<b>Clone:</b>	DBM15.60
<b>Immunogen:</b>	Recombinant human Adipophilin protein fragment.
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Adrenal gland
<b>Cellular Localization:</b>	Cytoplasmic

This protein is associated with the lipid globule surface membrane material, and maybe involved in development and maintenance of adipose tissue. However, it is not restricted to adipocytes as previously thought, but is found in a wide range of cultured cell lines, including fibroblasts, endothelial and epithelial cells, and tissues, such as lactating mammary gland, adrenal cortex, Sertoli Leydig cells, hepatocytes in alcoholic liver cirrhosis, suggesting that it may serve as a marker of lipid accumulation in diverse cell types and diseases.

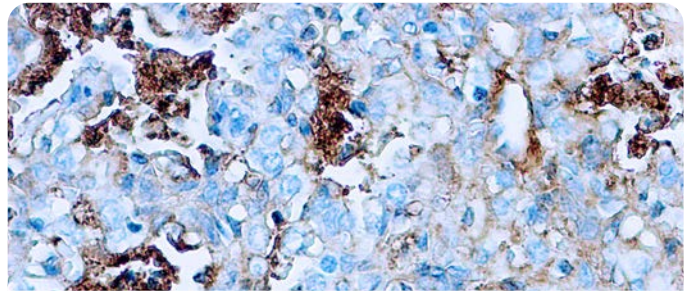


Formalin fixed paraffin embedded human pituitary stained with Adrenocorticotrophic Hormone

**Adrenocorticotrophic Hormone (ACTH)**  **IVD**

<b>Catalog No.:</b>	Mob244 Concentrated PDM583 Prediluted
<b>Clone:</b>	AH26
<b>Immunogen:</b>	BALB/C mice were injected with a synthetic peptide corresponding to amino acids 1-24 from the N-terminal of human ACTH.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Pituitary
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to an epitope on the N-terminus of ACTH. This antibody stains corticotrophs in the adenohypophysis and is useful in the classification of pituitary adenomas.



Formalin fixed paraffin embedded human liver stained with Albumin

**Albumin**  **IVD**

<b>Catalog No.:</b>	RP046 Concentrated
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Purified human albumin
<b>Positive Control:</b>	Liver
<b>Cellular Localization:</b>	Cytoplasmic

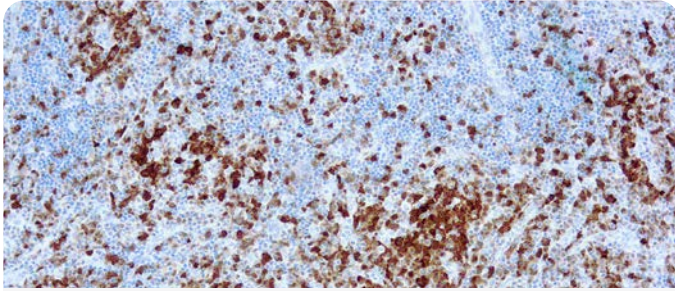
This antibody reacts with human albumin. This antibody is free of other rabbit serum proteins. Specificity is determined by Ouchterlony double diffusion (ODD) and immunoelectrophoresis (IEP) versus human serum and human albumin.

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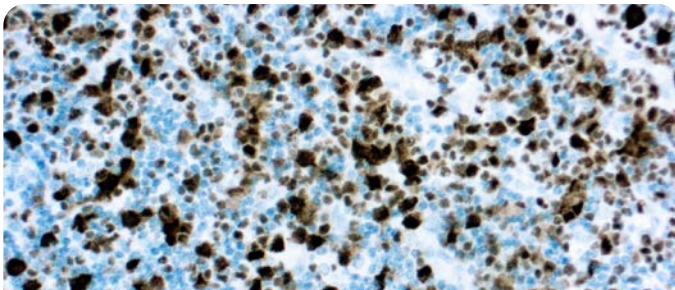
Formalin fixed paraffin embedded anaplastic lymphoma kinase stained with ALK/p80

**(NSCLC). ALK/p80 (Anaplastic Lymphoma Kinase)**



<b>Catalog No.:</b>	Mob416, Mob416R - Concentrated
<b>Clone:</b>	5A4
<b>Immunogen:</b>	Prokaryotic recombinant protein corresponding to a region which spans the tyrosine kinase catalytic domain and part of the C-terminus of NPM-ALK transcript (419-520 aa).
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Anaplastic lymphoma
<b>Cellular Localization:</b>	Cytoplasmic and/or nuclear

Anaplastic large cell lymphoma (ALCL) is usually composed of large pleomorphic cells, which express CD30 antigen and the epithelial membrane antigen (EMA). These tumor cells tend to occur in younger patients and may be associated with cutaneous and extranodal involvement. Large cell lymphoma account for approximately 25% of all non-Hodgkin lymphomas in children and young adults.



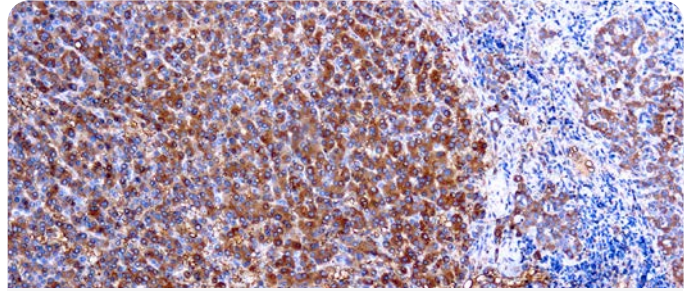
Formalin fixed paraffin embedded rhabdomyosarcoma stained with ALK

**ALK**



<b>Catalog No.:</b>	Mob566, Mob566R - Concentrated PDM566, PDM566R - Prediluted
<b>Clone:</b>	4A4
<b>Immunogen:</b>	Recombinant human ALK protein fragment.
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Anaplastic large cell lymphoma
<b>Cellular Localization:</b>	Cytoplasmic and nuclear staining (dot-like)

Anaplastic lymphoma kinase (ALK) known as ALK tyrosine kinase receptor or CD246, is a tyrosine kinase receptor. ALK is an important biomarker for diagnosis of non-small cell lung cancer.



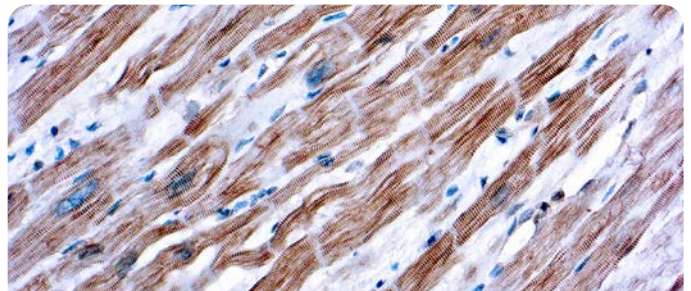
Formalin fixed paraffin embedded human hepatosarcoma stained with alpha-1-Antitrypsin

**alpha-1-Antitrypsin**



<b>Catalog No.:</b>	PDR021 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	alpha-1-antitrypsin isolated from human serum.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

The antibody is specific against human alpha-1-antitrypsin. This antibody stains macrophages in human tissues and does not stain any other cell type.



Formalin fixed paraffin embedded human skeletal muscle stained with alpha-Actinin, Sarcomeric

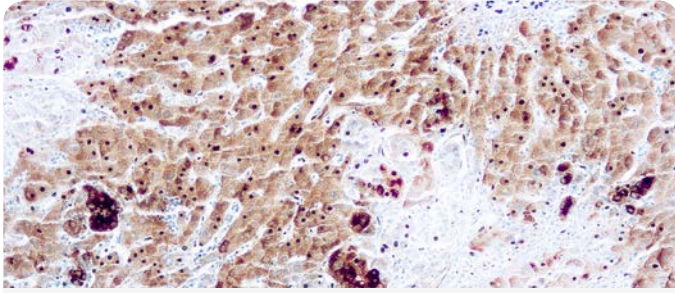
**alpha-Actinin, Sarcomeric**



<b>Catalog No.:</b>	Mob227 Concentrated
<b>Clone:</b>	EA-53
<b>Immunogen:</b>	Purified rabbit skeletal alpha-actinin.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skeletal muscle
<b>Cellular Localization:</b>	Cytoplasmic

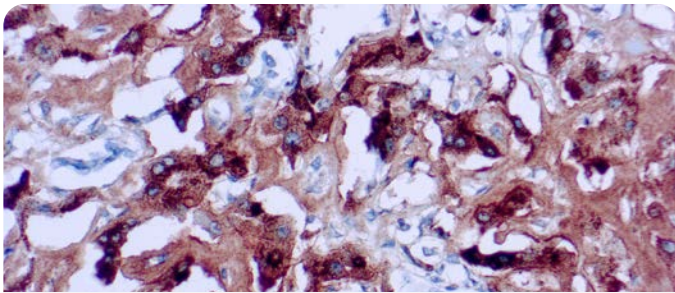
This antibody is specific for alpha-skeletal muscle actinin and alpha-cardiac actinin. It stains Z lines and dots in stress fibers of myotubes in skeletal and cardiac muscle but not in non-sarcomeric muscle elements.

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Formalin fixed paraffin embedded human Fetal liver stained with  $\alpha$ -Fetoprotein (AFP) **$\alpha$ -Fetoprotein (AFP)**

<b>Catalog No.:</b>	Mob129 Concentrated PDM057 Prediluted
<b>Clone:</b>	C3
<b>Immunogen:</b>	BALB/C mice were injected with purified human $\alpha$ -fetoprotein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Fetal liver
<b>Cellular Localization:</b>	Cytoplasmic

$\alpha$ -fetoprotein (AFP) is a single chain glycoprotein of 70 kDa that is normally expressed in the fetal liver, gastrointestinal tract and yolk sac. This antibody recognizes an epitope of  $\alpha$ -fetoprotein present in human and several other species.

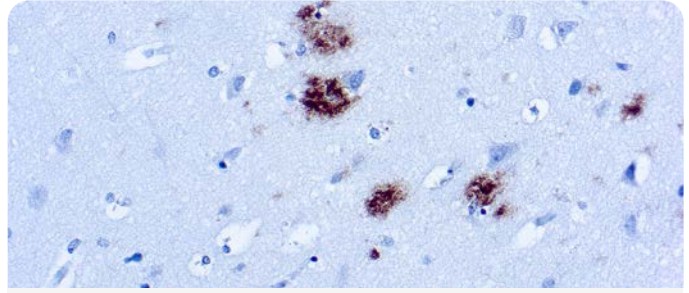


Formalin fixed paraffin embedded human amyloidosis stained with Amyloid A Component

**Amyloid A Component**

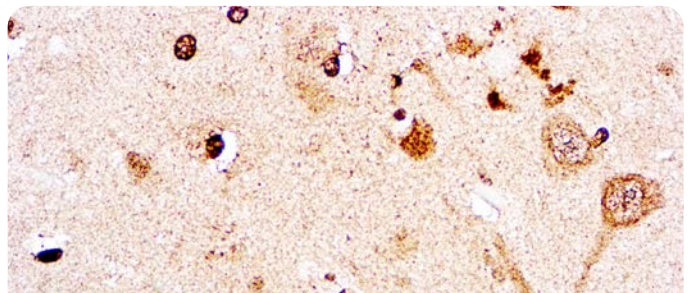
<b>Catalog No.:</b>	Mob003 Concentrated PDM118 Prediluted
<b>Clone:</b>	mc1
<b>Immunogen:</b>	Human amyloid A protein coupled to horseradish peroxidase and kininogen.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Kidney
<b>Cellular Localization:</b>	Extracellular

This antibody reacts with amyloid deposits in all organs and tissues. It reacts specifically with amyloid A protein in the native fibrils as well as fixed fibrils but does not show any reactivity with non-amyloid A fibril protein.

Formalin fixed paraffin embedded amyloidosis stained with  $\beta$ -Amyloid Protein **$\beta$ -Amyloid Protein**

<b>Catalog No.:</b>	Mob410 Concentrated
<b>Clone:</b>	BAM-10
<b>Immunogen:</b>	A synthetic $\beta$ -amyloid peptide (1-40) conjugated to KLH.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Brain, Amyloidosis
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with  $\beta$ -amyloid protein. This antibody stains amyloid plaques within the cortex and amyloid deposits in blood vessels.  $\beta$ -amyloid deposits are also detected in Lewy body dementia, Down syndrome, amyloidosis and, in Gram-Parkinson dementia complex. The presence of a large number of neuritic plaques (senile) and neurofibrillary tangles in the cerebral cortex is used as a pathological marker for a disease state and presents the major criterion for the diagnosis of Alzheimer's disease at autopsy.

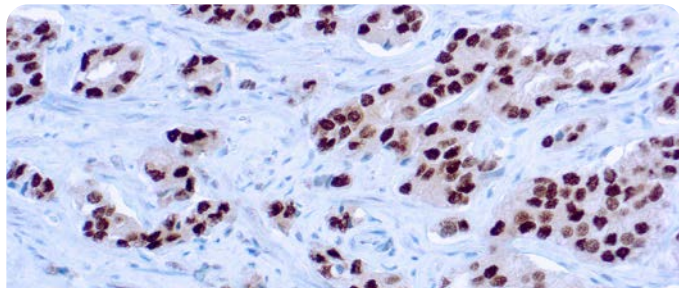


Formalin fixed paraffin embedded human brain stained with APP

**Amyloid Precursor Protein (APP)**

<b>Catalog No.:</b>	RP123 Concentrated PDR178 Prediluted
<b>Clone:</b>	Rabbit Polyclonal
<b>Immunogen:</b>	A synthetic peptide corresponding to C-terminal of human APP
<b>Positive Control:</b>	Brain
<b>Cellular Localization:</b>	Cytoplasmic, Extracellular

This antibody reacts with a 95-100 kDa protein. This antibody recognizes amyloid precursor proteins APP695, APP751 and APP770. Amyloid precursor protein and APP-like proteins are transmembrane glycoproteins with a similar modular domain structure.

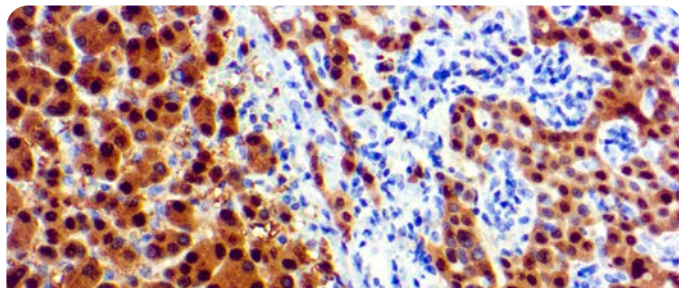


Formalin fixed paraffin embedded human prostate stained with Androgen Receptor

**Androgen Receptor**  

<b>Catalog No.:</b>	Mob245 Concentrated PDM167 Prediluted
<b>Clone:</b>	AR 441
<b>Immunogen:</b>	BALB/C mice were injected with a synthetic peptide corresponding to the human androgen receptor.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Prostate carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to a protein of 110 kDa, identified as androgen receptor. This antibody reacts with full length AR and also with the newly described A form of the receptor. This antibody does not cross-react with estrogen, progesterone or glucocorticoid receptors.

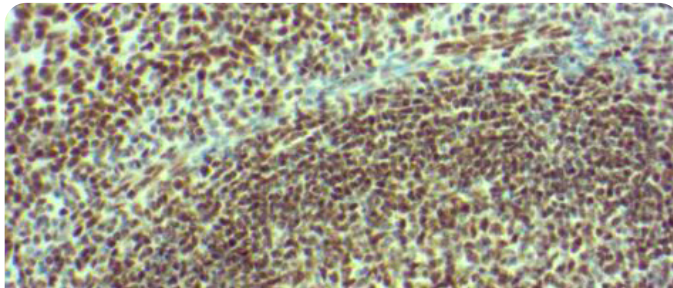


Formalin fixed paraffin embedded human hepatocellular carcinoma stained with Arginase 1

**Arginase 1**  

<b>Catalog No.:</b>	Mob484 Concentrated PDM197 Prediluted
<b>Clone:</b>	DBM15.12
<b>Immunogen:</b>	Recombinant fragment (87 Amino acid residues around aa 1- 150) of human ARG1 protein
<b>Isotype:</b>	IgG3, kappa
<b>Positive Control:</b>	Hepatocellular Carcinoma (HCC)
<b>Cellular Localization:</b>	Cytoplasmic

Arginase is a manganese metallo-enzyme that catalyzes the hydrolysis of arginine to generate ornithine and urea. Arginase I and II are isoenzymes which differ in subcellular localization, regulation, and possibly function. Arginase I is a cytosolic enzyme, which is expressed mainly in the liver as part of the urea cycle, whereas arginase II is a mitochondrial protein found in a variety of tissues. Antibody to ARG-1 labels hepatocytes in normal tissues and granulocytes in peripheral blood. ARG-1 is a sensitive and specific marker for identification of hepatocellular carcinoma.

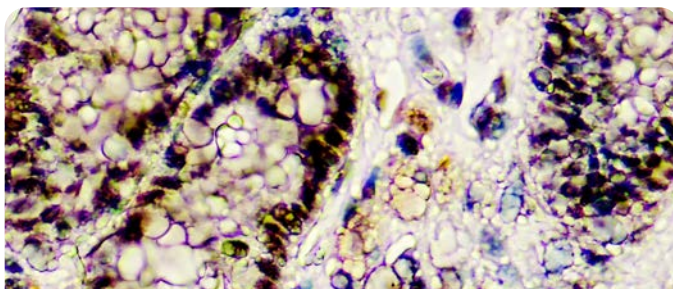


Formalin fixed paraffin embedded human pancreas stained with ATRX

**ATRX**  

<b>Catalog No.:</b>	Mob600 Concentrated PDM600 Prediluted
<b>Clone:</b>	D-5
<b>Immunogen:</b>	Raised against amino acids 2193-2492 mapping near the C-terminus of ATRX of human origin
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

Alpha-thalassemia/mental retardation X-linked (ATRX) is a transcriptional regulator and Helicase that belongs to the Snf2 family of chromatin remodelling proteins. Mutations in the ATRX gene correlates with a high incidence of severe X-linked form of syndromal mental retardation associated with a thalassemia or ATRX syndrome.

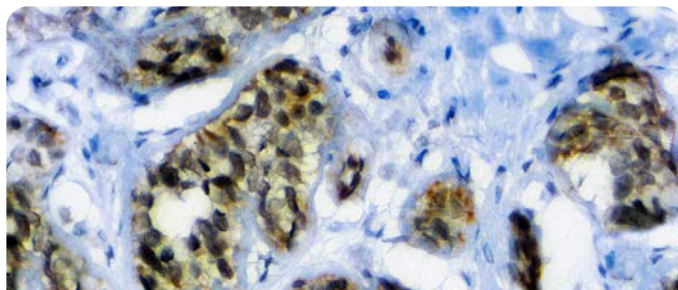


Formalin fixed paraffin embedded human breast carcinoma stained with BAP1

**BAP1**  

<b>Catalog No.:</b>	Mob603 Concentrated PDM603 Prediluted
<b>Clone:</b>	BAP1/2667
<b>Immunogen:</b>	Recombinant human BAP1 protein fragment (aa191-aa326, exact sequence is proprietary)
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast Carcinoma
<b>Cellular Localization:</b>	Nuclear and Cytoplasmic

BAP1 (BRCA1-Associated Protein 1) was initially identified as a protein that binds to BRCA1. BAP1 is a tumor suppressor that is believed to mediate its effects through chromatin modulation, transcriptional regulation, and possibly via the ubiquitin-proteasome system and the DNA damage response pathway. BAP1 immunohistochemistry is particularly useful in differentiating malignant mesothelioma (nuclear negative) vs. reactive mesothelial proliferation (nuclear positive).

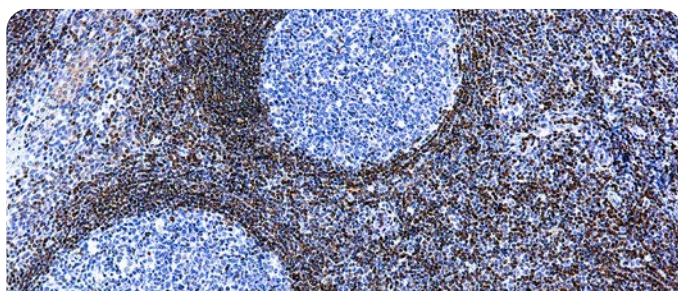


Formalin fixed paraffin embedded human Breast Carcinoma stained with BAP1

**BAP1**

<b>Catalog No.:</b>	PDM595 Prediluted
<b>Clone:</b>	C-4
<b>Immunogen:</b>	Synthetic peptide against 430-729 of human BAP1
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast Carcinoma
<b>Cellular Localization:</b>	nuclear and cytoplasmic

BAP1 is a tumor suppressor believed to mediate its effects through chromatin modulation, transcriptional regulation, and possibly via the ubiquitin-proteasome system and the DNA damage response pathway. Somatic BAP1 mutations are seen in cutaneous melanocytic tumors (epithelioid atypical Spitz tumors and melanoma), uveal melanoma, mesothelioma, clear cell renal cell carcinoma, and other tumors. BAP1 is particularly useful in differentiating malignant mesothelioma (nuclear negative) vs. reactive mesothelial proliferation (nuclear positive).

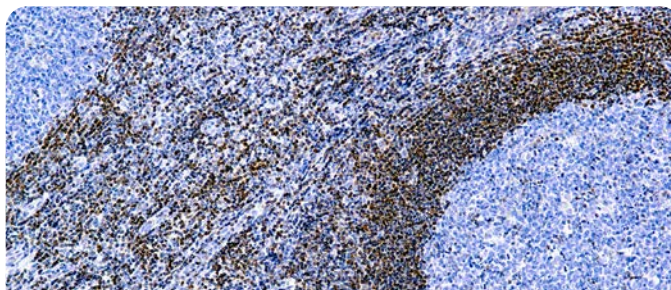


Formalin fixed paraffin embedded human tonsil stained with Bcl-2 Oncoprotein

**Bcl-2 Oncoprotein**

<b>Catalog No.:</b>	Mob130 Concentrated PDM209 Prediluted
<b>Clone:</b>	100/D5
<b>Immunogen:</b>	BALB/C mice were injected with synthetic bcl-2 peptide.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

The bcl-2 product is considered to act as an inhibitor of apoptosis. Bcl-2 expression is inhibited in germinal centers where apoptosis forms part of the B cell production pathway. Reactive follicles show no staining for bcl-2, whereas the cells in neoplastic follicles exhibit membrane staining. Bcl-2 oncprotein has been shown to inhibit apoptosis.

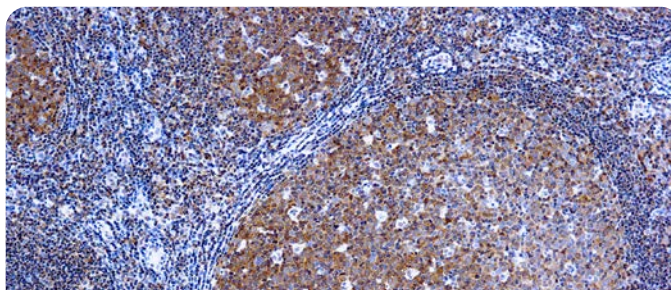


Formalin fixed paraffin embedded human tonsil stained with Bcl-2 Oncoprotein

**Bcl-2 Oncoprotein**

<b>Catalog No.:</b>	Mob005 Concentrated PDM016 Prediluted
<b>Clone:</b>	124
<b>Immunogen:</b>	Recombinant bcl-2 peptide sequence comprising of 51-54 amino acids of bcl-2 oncoprotein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to bcl-2 oncoprotein, encoded by a gene involved in the 14;18 chromosomal translocation. In lymphoid tissues, this antibody stains B lymphocytes as well as T cells.

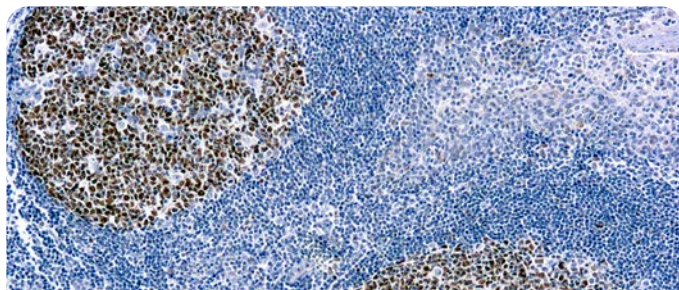


Formalin fixed paraffin embedded human tonsil stained with Bcl-10

**Bcl-10**

<b>Catalog No.:</b>	Mob442 Concentrated PDM442 Prediluted
<b>Clone:</b>	151
<b>Immunogen:</b>	Human recombinant Bcl-10
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

Monoclonal anti-bcl-10 reacts specifically with human bcl-10. The epitope recognized by the antibody resides within amino acids 122-168 of human bcl-10 molecule. Bcl-10, also designated as CIPER, mE10, cE10, CARMEN, and CLAP, is an N-terminal CARD (caspase recruitment domain) containing protein. It is a cellular homologue of the equine herpesvirus-2 protein E-10 (vCLAP). Bcl-10 was implicated in the regulation of apoptosis by interacting with caspase 9, enhancing procaspase 9 processing, and triggering its activation when overexpressed in the cell. Bcl-10 cellular overexpression induces JNK, p38, and NF- $\kappa$ B activation. Deregulation of bcl-10 expression was also demonstrated to be involved in cellular oncogenesis.

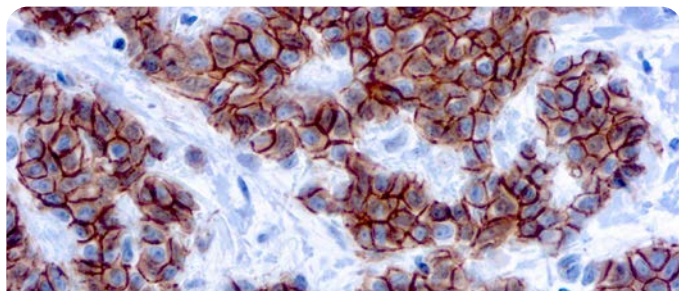


Formalin fixed paraffin embedded human tonsil stained with Bcl-6 antibody

**Bcl-6 Oncoprotein**  **IVD**

<b>Catalog No.:</b>	Mob587 Concentrated PDM587 Prediluted
<b>Clone:</b>	PG-B6
<b>Immunogen:</b>	Recombinant protein from the N-terminus of human Bcl-6.
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with the Bcl-6 gene product in follicular lymphomas, diffuse large B cell lymphomas, Burkitt's lymphomas, and in nodular, lymphocyte predominant Hodgkin's disease. Bcl-6 is a proto-oncogene that encodes Kruppel-type Zinc-finger protein of 95 kDa and shares homology with transcription factor. Bcl-6 is mainly expressed in normal germinal center B cells and related lymphomas.

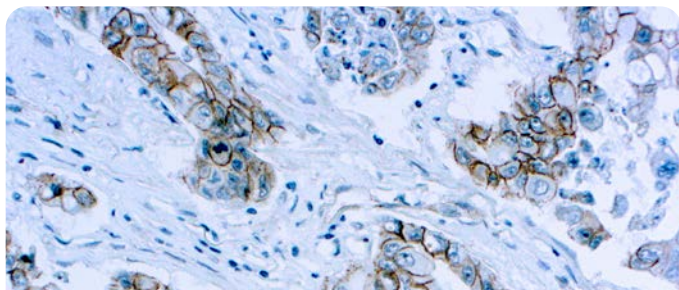


Formalin fixed paraffin embedded human Breast carcinoma stained with Beta Catenin

**Beta Catenin (p120 Catenin)**  **IVD**

<b>Catalog No.:</b>	Mob529 Concentrated PDM529 Prediluted
<b>Clone:</b>	DBM15.55
<b>Immunogen:</b>	Recombinant human beta-Catenin (p120) protein Fragment
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cell Surface and Cytoplasmic

Beta-Catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule. Immune staining of beta-catenin and E-cadherin helps accurately identify ductal and lobular neoplasms, including a distinction between low-grade ductal carcinoma in situ (DCIS).

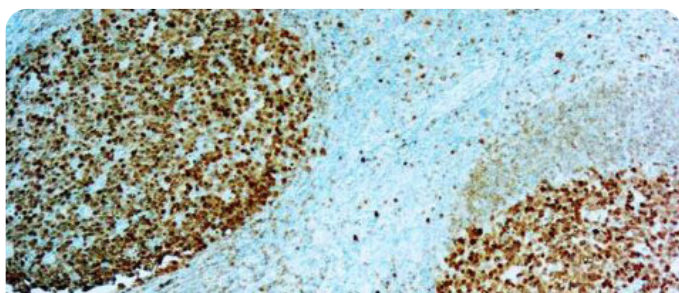


Formalin fixed paraffin embedded human lung carcinoma stained with Catenin beta

**Beta-Catenin**  **IVD**

<b>Catalog No.:</b>	RP080 Concentrated PDR060 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide derived from the C-terminus of human beta-catenin protein.
<b>Positive Control:</b>	Breast carcinoma, Large intestine
<b>Cellular Localization:</b>	Cytoplasmic, cell membrane

This antibody reacts with a 92 kDa protein known as beta-catenin. The catenins (alpha, beta and gamma) are ubiquitously expressed cytoplasmic proteins, which are associated with E-cadherin. beta-catenin can also bind to APC. Cadherin/catenin complexes are linked to the cytoskeleton via a direct association between alpha-actinin and alpha-catenin.

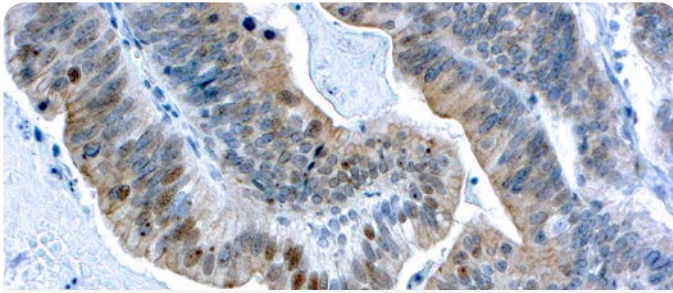


Formalin fixed paraffin embedded human Tonsil stained with BOB.1

**BOB.1**  **IVD**

<b>Catalog No.:</b>	RMAB110 Concentrated RMPD110 Prediluted
<b>Clone:</b>	SP92
<b>Immunogen:</b>	Synthetic peptide within Human BOB1 aa 200 to the C-terminus (C terminal). The exact sequence is proprietary
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

Transcriptional coactivator that specifically associates with either OCT1 or OCT2. It boosts the OCT1 mediated promoter activity and to a lesser extent, that of OCT2. It has no intrinsic DNAbinding activity. It recognizes the POU domains of OCT1 and OCT2. It is essential for the response of B-cells to antigens and required for the formation of germinal centers.

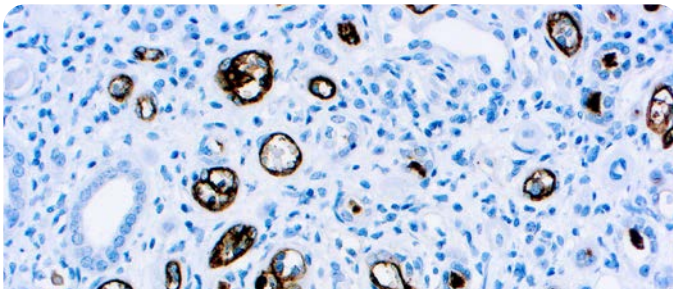


Formalin fixed paraffin embedded ovarian cancer stained with BRCA1

**BRCA1**

<b>Catalog No.:</b>	Mob424, Mob424R - Concentrated
<b>Clone:</b>	GLK-2
<b>Immunogen:</b>	Peptide corresponding to amino acids 1839-1863 of the C-terminus of BRCA1.
<b>Isotype:</b>	IgM, kappa
<b>Positive Control:</b>	Ovarian carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

BRCA1 recognizes a 22kDa protein. This antibody stains 94% of ovarian carcinomas with a mutation in exon 11. However, staining was absent in 100% of tumors with mutations other than exon 11.

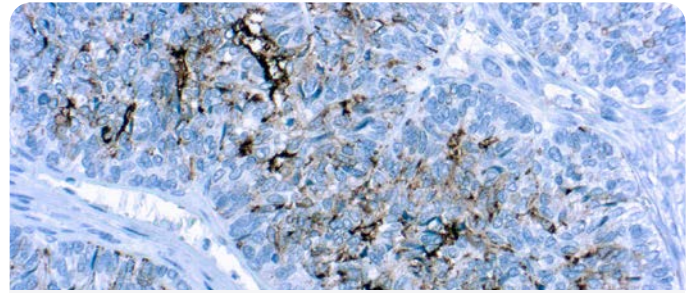


Formalin fixed paraffin embedded human rejected kidney stained with C4D

**C4D**

<b>Catalog No.:</b>	Mob471 Concentrated PDM184 Prediluted
<b>Clone:</b>	C4D204
<b>Immunogen:</b>	A recombinant fragment specific to Complement 4d.
<b>Isotype:</b>	Mouse IgG1
<b>Positive Control:</b>	Rejected Kidney
<b>Cellular Localization:</b>	Membrane Cytoplasm

Complement 4d (C4d) is the most clinically used marker for humoral rejection. It is a degradation product of the activated complement factor C4b. Complement 4d is typically initiated by binding of antibodies to specific target molecules. Following activation and degradation of the C4 molecule, thio-ester groups are exposed, which allow transient, covalent binding of the degradation product complement 4d to endothelial cell surfaces and extracellular matrix components of vascular basement membranes near the sites of C4 activation. Complement 4d is also found in intracytoplasmic vacuoles of endothelial cells. Covalent binding renders C4d a stable molecule that can easily be detected by immunohistochemistry.

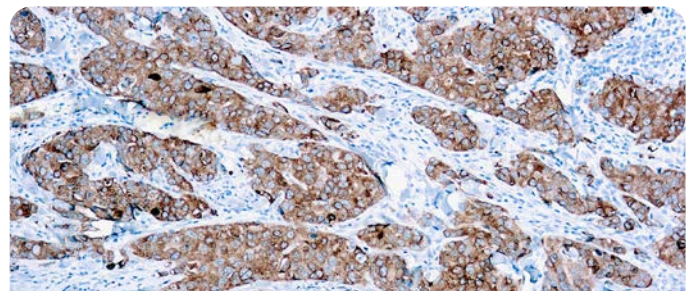


Formalin fixed paraffin embedded ovarian carcinoma stained with CA 125

**CA 125**

<b>Catalog No.:</b>	Mob110 Concentrated PDM323 Prediluted
<b>Clone:</b>	OV185:1
<b>Immunogen:</b>	Partially purified human mucin fraction from a pool of cancer tissues of patients with epithelial ovarian cancer.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Ovarian carcinoma
<b>Cellular Localization:</b>	Extracellular membrane

This antibody reacts specifically with CA 125 ovarian cancer antigen. Several studies have shown that CA 125 is a useful tumor marker for ovarian epithelial malignancies. However, CA 125 has been described in other neoplasms such as seminal vesicle and anaplastic lymphomas.

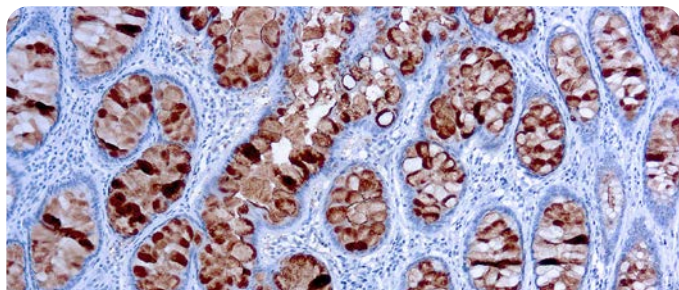


Formalin fixed paraffin embedded human breast carcinoma stained with CA 15-3

**CA15-3/MUC1**

<b>Catalog No.:</b>	Mob549 Concentrated PDM549 Prediluted
<b>Clone:</b>	DBMM1
<b>Immunogen:</b>	Human breast cancer cell line ZR-75-1.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic, cell membrane

This antibody is specific to epithelial membrane antigen (EMA), CA 15-3, or polymorphic epithelial mucin. This antibody stains an underglycosylated MUC1 often present on carcinoma cells.



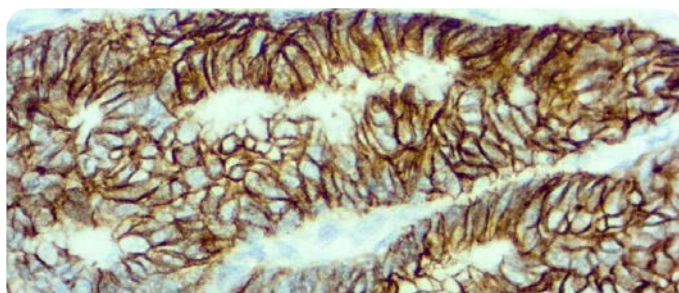
Formalin fixed paraffin embedded colon cancer stained with CA 19-9

**CA 19-9**



<b>Catalog No.:</b>	Mob109 Concentrated PDM567 Prediluted
<b>Clone:</b>	C241:5:1:4
<b>Immunogen:</b>	Human colorectal adenocarcinoma cell line COLO 205.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Colon carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts specifically with sialyl Lewis a and recognizes an epitope being designated CA 19-9. It does not cross-react with Lewis A and Lewis B. CA 19-9 has been shown to be useful marker in the diagnosis and management of gastrointestinal cancers.



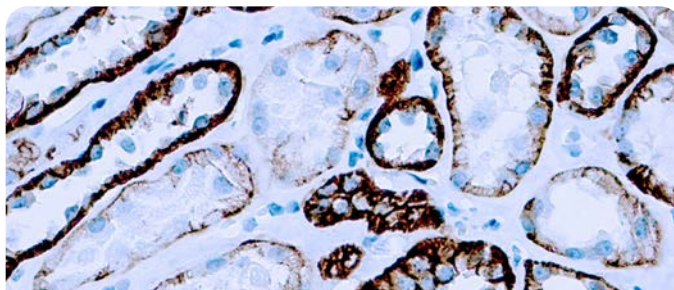
Formalin fixed paraffin embedded human colorectal carcinoma and normal colon stained with Cadherin 17

**Cadherin 17**



<b>Catalog No.:</b>	Mob604R Concentrated PDM604R Prediluted
<b>Clone:</b>	1H3
<b>Immunogen:</b>	Recombinant human cadherin 17 protein fragment (aa 24 -aa 131)
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Colorectal Carcinoma and normal colon
<b>Cellular Localization:</b>	Membranous and cytoplasmic

Cadherin-17, also called liver-intestine cadherin, is a calcium-dependent transmembrane glycoprotein that mediates cell-cell adhesion in intestinal epithelium. In human, expression of cadherin-17 is limited to intestinal epithelial cells and is not found in the liver. It has been shown to be a useful marker for distinguishing between gastrointestinal adenocarcinoma and pancreatic adenocarcinoma.



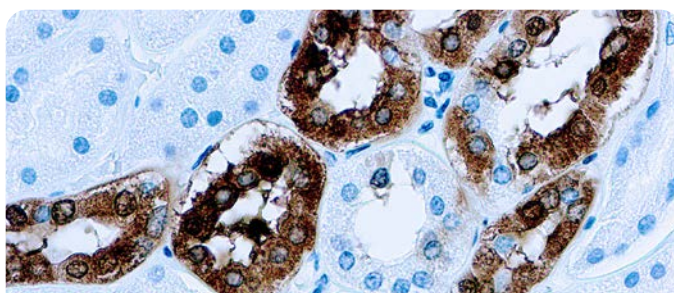
Formalin fixed paraffin embedded human renal cell carcinoma stained with Cadherin, Pan

**Cadherin, Pan**



<b>Catalog No.:</b>	Mob228 Concentrated
<b>Clone:</b>	CH-19
<b>Immunogen:</b>	Synthetic peptide corresponding to the C-terminal amino acids of chicken N-cadherin with extra N-terminal lysine residue.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with pan cadherin with a distinct 135 kDa band from a wide variety of tissues. Cadherins are members of a multigene family of single chain glycoprotein receptors mediating Ca<sup>2+</sup> dependent cell-cell adhesion.



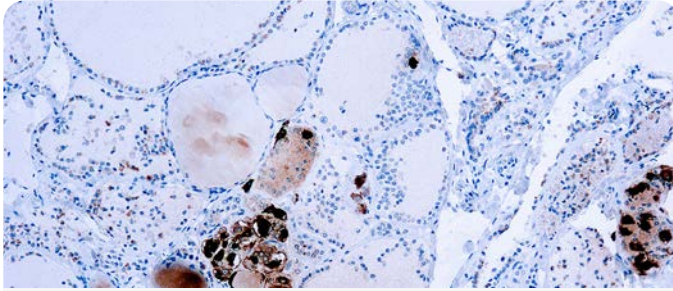
Formalin fixed paraffin embedded human kidney stained with Calbindin-D-28K

**Calbindin-D-28K**



<b>Catalog No.:</b>	Mob554 Concentrated
<b>Clone:</b>	CB-955
<b>Immunogen:</b>	Purified bovine kidney calbindin-D-28K.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Kidney
<b>Cellular Localization:</b>	Cytoplasmic, cell membrane

This antibody is specific to a protein of 28 kDa. Calbindin-D-28K is also known as vitamin D-dependent calcium-binding protein or cholecalciferol. Calbindin D-28K has a broad tissue distribution; however it exhibits a cell type-specific expression pattern. This antibody reacts specifically with calbindin-D-28K in brain and kidney tissues.



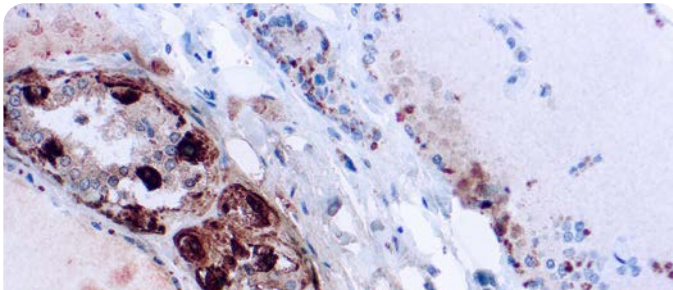
Formalin fixed paraffin embedded human thyroid stained with Calcitonin

### Calcitonin



<b>Catalog No.:</b>	RP050 Concentrated PDR024 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Synthetic peptide of human calcitonin corresponding to amino acids 1-32.
<b>Positive Control:</b>	Thyroid
<b>Cellular Localization:</b>	Cytoplasmic

This antibody stains C cells of the thyroid. Staining for calcitonin may be used for the identification of a spectrum of C cell proliferative abnormalities ranging from C cell hyperplasia to invasive tumors.



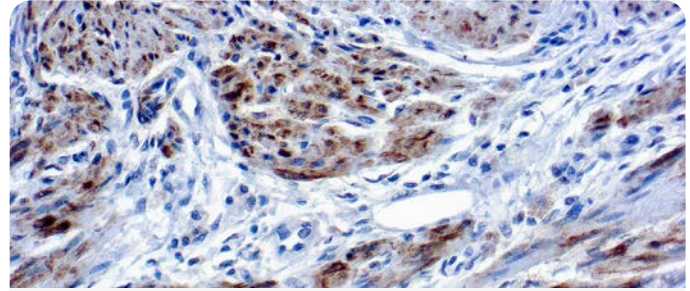
Formalin fixed paraffin embedded human thyroid medullary carcinoma stained with Calcitonin

### Calcitonin



<b>Catalog No.:</b>	RMAB009 Concentrated RMPD009 Prediluted
<b>Clone:</b>	SP17
<b>Immunogen:</b>	Synthetic human calcitonin 1-32 amino acid peptide.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Thyroid or medullary carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes calcitonin, a 32 amino acid peptide, which can be demonstrated in C cells of the normal and hyperplastic thyroid. Staining for calcitonin may be used for the identification of a spectrum of C cell proliferative abnormalities ranging from C cell hyperplasia to invasive tumors. Staining for calcitonin in medullary carcinoma of the thyroid produces a fine granular pattern in the cytoplasm. Amyloid deposits within the tumor may also exhibit varying degrees of calcitonin activity.



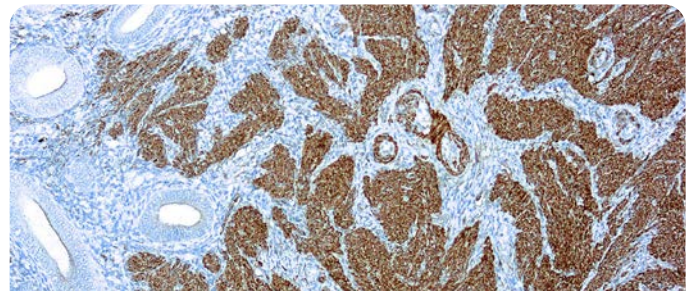
Formalin fixed paraffin embedded endometrial cancer stained with Caldesmon

### Caldesmon



<b>Catalog No.:</b>	Mob556 Concentrated PDM223 Prediluted
<b>Clone:</b>	hHCD
<b>Immunogen:</b>	BALB/C mice were injected with human uterus smooth muscle extract.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Endometrial cancer
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to high molecular weight (120-150 kDa) h-caldesmon. Caldesmon is involved in smooth muscle and non-muscle contraction. Two closely related variants of human caldesmon have been identified. The h-caldesmon variant is predominantly expressed in smooth muscle, whereas l-caldesmon (71-80 kD) is found in non-muscle tissue and cells.



Formalin fixed paraffin embedded human uterus stained with Calponin

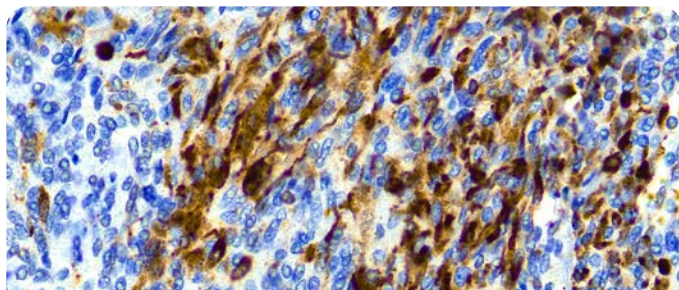
### Calponin-1



<b>Catalog No.:</b>	Mob345 Concentrated PDM219 Prediluted
<b>Clone:</b>	CALP (same as hCP)
<b>Immunogen:</b>	BALB/C mice were injected with crude human uterus extract
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with a 34 kDa protein known as calponin. Calponin, a calmodulin, binds tropomyosin and F-actin and is thought to be involved in the regulation of smooth muscle contraction. Expression of calponin is restricted to smooth muscle cells. Two isoforms of calponin exist whose molecular weights are 34 kDa and 29 kDa. 29 kDa isoform is primarily restricted to the muscle of the urogenital tract.



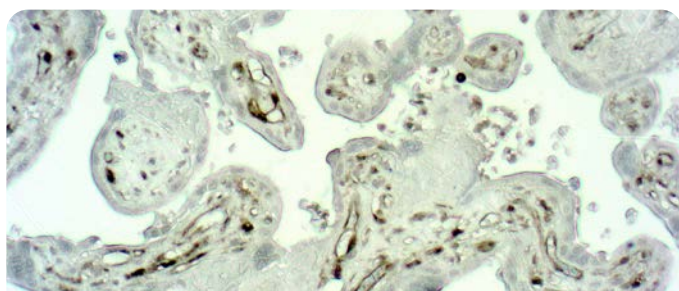


Formalin fixed paraffin embedded human Mesothelioma stained with Calretinin (H-5)

**Calretinin (H-5)**  **IVD**

<b>Catalog No.:</b>	Mob593 Concentrated PDM593 Prediluted
<b>Clone:</b>	H-5
<b>Immunogen:</b>	specific for an epitope mapping between amino acids 2-27 at the N-terminus of Calretinin of human origin
<b>Isotype:</b>	IgG2b, Kappa
<b>Positive Control:</b>	Mesothelioma
<b>Cellular Localization:</b>	Cytoplasmic

Calretinin is an intracellular calcium-binding protein belonging to the troponin C superfamily characterized by a structural motif described as the EF-hand domain. The intensity of staining increases as the cerebellum matures. In tumors, calretinin has been detected in mesotheliomas and some pulmonary adenocarcinomas.

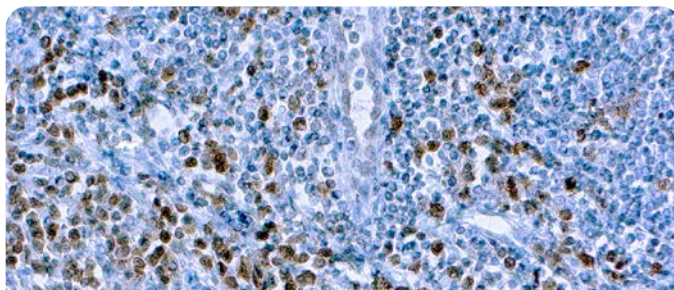


Formalin fixed paraffin embedded human Placenta stained with Caspase 1

**Caspase 1**  **IVD** **RUO**

<b>Catalog No.:</b>	RP175, RP175R - Concentrated PDR175, PDR175R - Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Caspase1 (1-250aa) protein.
<b>Positive Control:</b>	Placenta
<b>Cellular Localization:</b>	Nuclear, cell membrane

Caspase 1 and is expressed as a proenzyme in many tissues. Active Caspase 1 is a tetramer of two subunits p10 and p20 in 2:2 ratio. Overexpression of caspase 1 can induce apoptosis in fibroblast, which can be inhibited by overexpression of Crm A, a protein from pox virus.

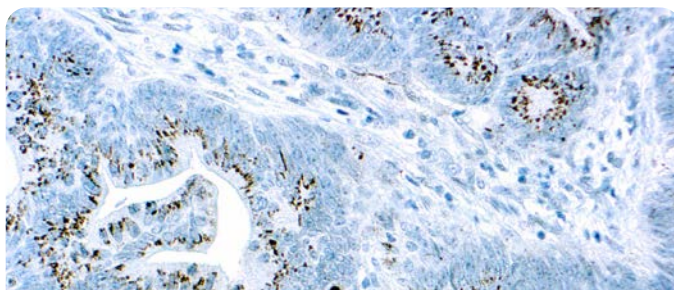


Formalin fixed paraffin embedded human tonsil stained with Caspase 3/ CPP32

**Caspase 3/ CPP32**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob309, Mob309R - Concentrated
<b>Clone:</b>	3CSP03
<b>Immunogen:</b>	BALB/C mice were injected with recombinant full length human caspase 3 protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a 32 kDa protein. Caspase 3 is associated with induction of apoptosis. Caspase 3 is ubiquitously expressed and is synthesized as an inactive proenzyme.

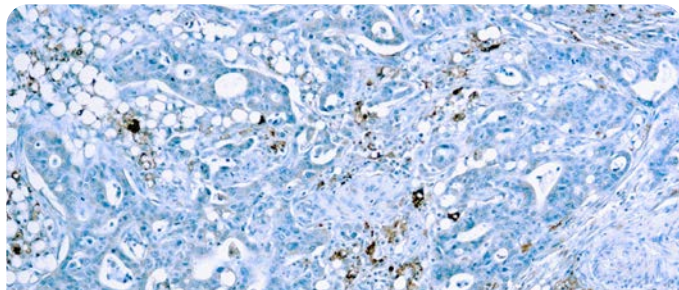


Formalin fixed paraffin embedded human Adeno Colon Ca stained with Caspase 3/ CPP32

**Caspase 3/ CPP32**  **IVD**

<b>Catalog No.:</b>	RP096 Concentrated PDR172 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide corresponding to the cleavage site of human caspase 3 (amino acids 167-175), conjugated to KLH.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic, some nuclear

This antibody reacts with the active form of caspase 3 (17 kD protein). Caspase 3 is a member of the interleukin-1 beta-converting enzyme family and is thought to be associated with the induction of apoptosis. Caspase 3 is synthesized as an inactive 32 kD proenzyme and is processed during apoptosis generating two subunits of 17 kD and 12 kD. Caspase 3 stains the epithelial cells of skin, renal proximal tubules, and collecting ducts.



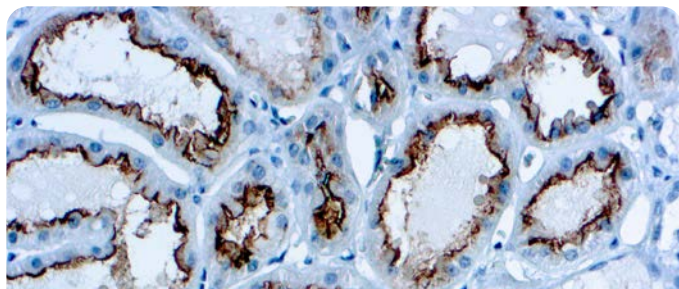
Formalin fixed paraffin embedded human prostate stained with Cathepsin D

**Cathepsin D**



<b>Catalog No.:</b>	RP004 Concentrated PDR004 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Cathepsin D isolated from human liver.
<b>Positive Control:</b>	Breast carcinoma, Prostate
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with the zymogen as well as the activated form of cathepsin D. It stains fibroblasts and macrophages strongly but stains weakly with the myoepithelial cells of breast. It stains the sweat ducts and glands in the skin, islets cells, and granules of pancreatic acini.



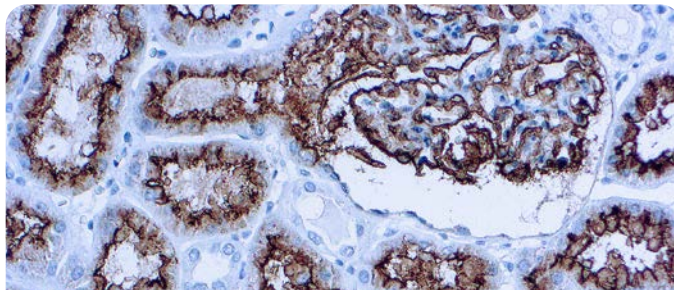
Formalin fixed paraffin embedded renal cell carcinoma stained with CD10

**CD10**



<b>Catalog No.:</b>	RMAB037 Concentrated RMPD037 Prediluted
<b>Clone:</b>	EP195
<b>Immunogen:</b>	A recombinant fragment corresponding to residues in human CD10 protein.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Tonsil, Renal Cell Carcinoma, Follicular Lymphoma
<b>Cellular Localization:</b>	Cytoplasmic Cell Membrane

CD10 is expressed by a number of hematopoietic cells such as immature T and B cells, B cells of the germinal centers of lymphoid follicles, and granulocytes. CD10 has been used for the identification and classification of certain types of malignant lymphoma and leukaemia. CD10 is expressed in a high percentage of cases of acute lymphoblastic leukaemia, follicular lymphoma, Burkitt lymphoma, some hematopoietic tumors, and chronic myelogenous leukaemia in lymphoid blast crisis.



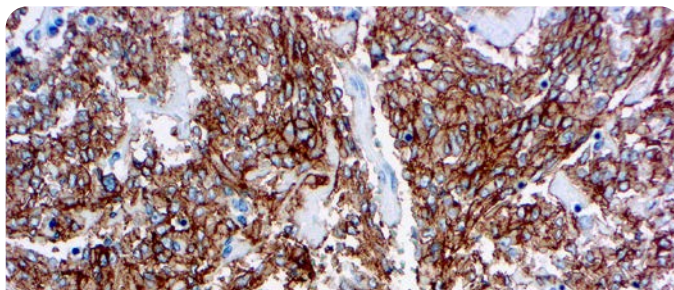
Formalin fixed paraffin embedded human renal cell carcinoma stained with CD10.

**CD10**



<b>Catalog No.:</b>	Mob240 Concentrated PDM107 Prediluted
<b>Clone:</b>	56C6
<b>Immunogen:</b>	Prokaryotic recombinant protein corresponding to the external domain of the CD10 glycoprotein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil, Renal Cell Carcinoma
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to human CD10 antigen of 100 kDa, also known as common acute lymphocytic leukemia antigen (CALLA). CD10 antigen has been identified on the surface of early lymphoid progenitor cells, immature B cells within adult bone marrow, and germinal center B cells within lymphoid tissue.



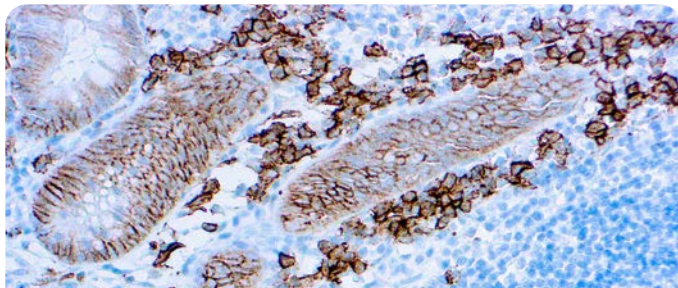
Formalin fixed paraffin embedded human gastrointestinal stromal tumor stained with CD117/c-Kit antibody.

**CD117/c-Kit**



<b>Catalog No.:</b>	RP063, RP063R - Concentrated PDR045, PDR045R - Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide from C-terminus of human CD117/c-Kit protein.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane, cytoplasm

This antibody reacts with a 145 kDa protein. CD117/c-Kit is a transmembrane receptor tyrosine kinase and is expressed in many tissues and cells. CD117/c-Kit is involved in the development of several lineages of stem cells, such as germ cells, neural crest derived melanocytes and hematopoietic precursor cells. This antibody can be used in the identification of gastrointestinal stromal tumors.

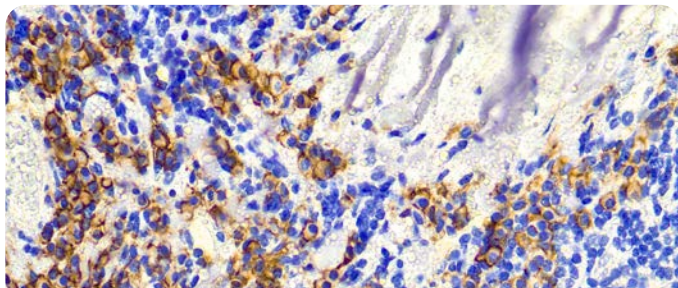


Formalin fixed paraffin embedded human tonsil tissue stained with CD138

**CD138**  

<b>Catalog No.:</b>	Mob588 Concentrated PDM588 Prediluted
<b>Clone:</b>	B-A38
<b>Immunogen:</b>	U266 cell line
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Membrane

CD138, also known as Syndecan-1, is a member of the transmembrane heparan sulfate proteoglycan family, acts as an extracellular matrix receptor and is involved in many cellular functions, including cell-cell adhesion and cell-matrix adhesion. CD138 expression is found in both hematopoietic and non-hematopoietic cells. In the hematopoietic system, CD138 labels plasma cells. It is an excellent marker for plasmacytic differentiation within the spectrum of hematologic malignancy. Among non-hematolymphoid cells, CD138 reactivity is observed in many types of epithelial cells and stoma cells in both normal and tumor tissues.

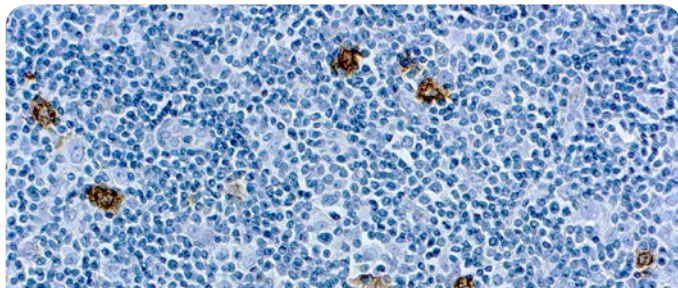


Formalin fixed paraffin embedded human tonsil stained with CD138.

**CD138**  

<b>Catalog No.:</b>	RMAB040 Concentrated RMPD040 Prediluted
<b>Clone:</b>	EP201
<b>Immunogen:</b>	A synthetic peptide corresponding to residues in human CD138 protein.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Tonsil, plasmacytoma
<b>Cellular Localization:</b>	Membrane

In the hematopoietic system, CD138 labels plasma cells. It is an excellent marker for plasmacytic differentiation within the spectrum of hematologic malignancy. Among non-hematolymphoid cells, CD138 reactivity is observed in many types of epithelial cells and stoma cells in both normal and tumor tissues.

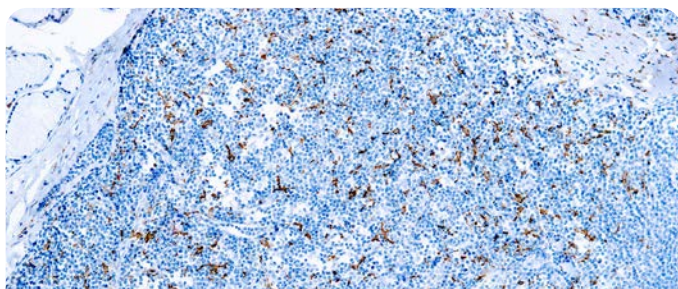


Formalin fixed paraffin embedded human tonsil stained with CD15

**CD15**  

<b>Catalog No.:</b>	Mob365 Concentrated PDM127 Prediluted
<b>Clone:</b>	MMA; same as LeuM1
<b>Immunogen:</b>	BALB/C mice were injected with U937 histiocytic cell line.
<b>Isotype:</b>	IgM, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a 220 kDa protein. CD15 plays a role in mediating phagocytosis, bactericidal activity and chemotaxis. It is present on >95% of granulocytes including neutrophils and eosinophils and to a lesser degree on monocytes. CD15 is also expressed in Reed-Sternberg cells and some epithelial cells. CD15 is very useful in the identification of Hodgkin disease.

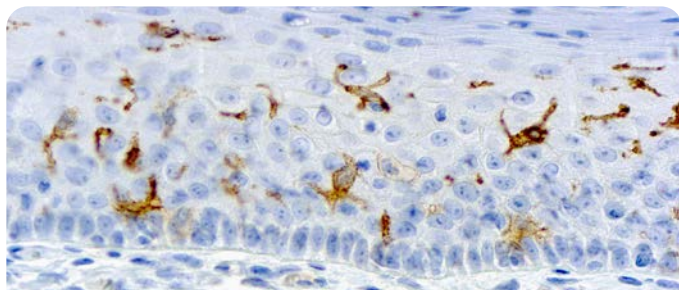


Formalin fixed paraffin embedded human tonsil stained with CD163 antibody.

**CD163**  

<b>Catalog No.:</b>	Mob460 Concentrated PDM579 Prediluted
<b>Clone:</b>	10D6
<b>Immunogen:</b>	Human CD163 antigen.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Membrane

The CD163 molecule is a type I membrane protein also known as M130 antigen, Ber-Mac3, Ki-M8 or SM4. CD163 protein is restricted in its expression to the monocytic/macrophage lineage. It is reported to be present on all circulating monocytes and most tissue macrophages except those found in the mantle zone and germinal centers of lymphoid follicles, interdigitating reticulum cells and Langerhans cells.

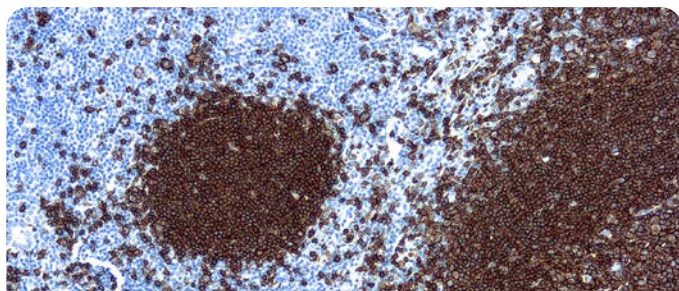


Formalin fixed paraffin embedded human tonsil stained with CD1a

**CD1a**  

<b>Catalog No.:</b>	Mob363 Concentrated PDM173 Prediluted
<b>Clone:</b>	O10
<b>Immunogen:</b>	BALB/C mice were injected with thymus cells.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane, cytoplasm

This antibody reacts with a 49 kDa protein. At least five CD1 genes are identified (CD1a, b, c, d, and e). This antibody reacts with cortical thymocytes, Langerhans cells in epidermis, dendritic cells of dermis, and Langerhans cells of mucosa of tonsil. This antibody may be useful in the characterization of leukemias and lymphomas.

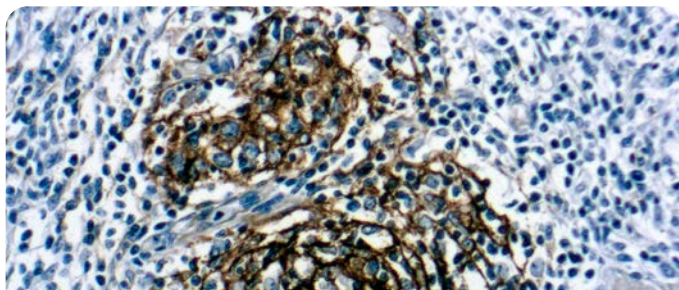


Formalin fixed paraffin embedded human tonsil stained with CD20

**CD20**  

<b>Catalog No.:</b>	Mob004 Concentrated PDM004 Prediluted
<b>Clone:</b>	L26
<b>Immunogen:</b>	BALB/C mice were injected with human tonsil B cells.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane and cytoplasm

This antibody is specific to a 33 kDa polypeptide present on the majority of B cells in peripheral blood and lymphoid tissue. No reactivity with other hematopoietic cells has been observed.

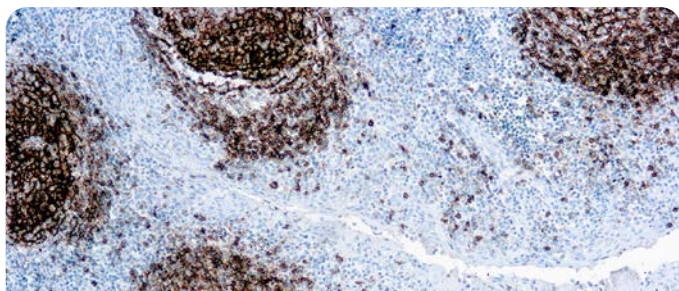


Formalin fixed paraffin embedded human tonsil stained with CD21

**CD21, B Cell**  

<b>Catalog No.:</b>	Mob028 Concentrated PDM122 Prediluted
<b>Clone:</b>	1F8
<b>Immunogen:</b>	Purified receptor for the C3d fragment of the third complement component CR2, from human tonsil.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with CD21 antigen of MW 145 kDa, present on the surface of mature B cells. The antigen is present at high density on follicular dendritic cells. CD21 is involved in transmitting growth-promoting signals to the interior of the B cell.

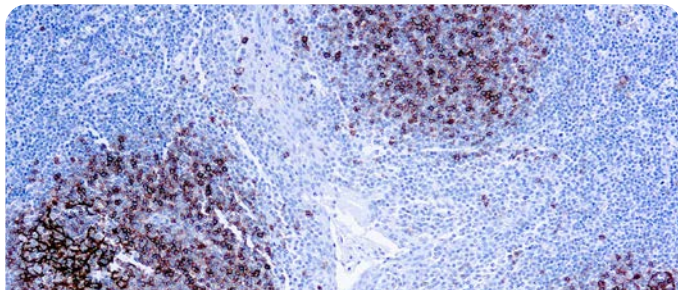


Formalin fixed paraffin embedded human tonsil stained with CD23

**CD23**  

<b>Catalog No.:</b>	Mob294 Concentrated PDM143 Prediluted
<b>Clone:</b>	1B12
<b>Immunogen:</b>	Prokaryotic recombinant fusion protein corresponding to the external domain of the CD23 molecule.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to a membrane glycoprotein of 45 kDa, designated as CD23. CD23 is found on a subpopulation of peripheral blood cells, B lymphocytes, and on EBV transformed B lymphoblastoid cell lines. Expression of CD23 has been detected in neoplastic cells from cases of B cell chronic lymphocytic leukemias.

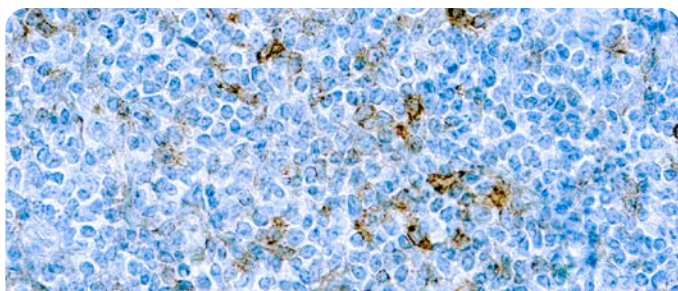


Formalin fixed paraffin embedded human tonsil stained with CD23 antibody.

**CD23**  

<b>Catalog No.:</b>	RMAB013 Concentrated RMPD013 Prediluted
<b>Clone:</b>	SP23
<b>Immunogen:</b>	Recombinant protein encoding human CD23 48-248 aa.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody recognizes CD23. CD23 is a 45kDa glycoprotein which is present on a subpopulation of freshly isolated peripheral blood and tonsil B cells and strongly expressed on EBV-transformed B lymphoblasts. The CD23 molecule is identical to the low affinity IgE receptor found on B cells. Expression of CD23 has been detected in neoplastic cells from cases of B cell chronic lymphocytic leukemia and some cases of centroblastic/centrocytic lymphoma.

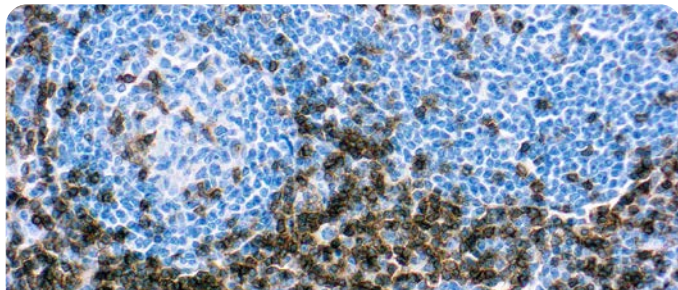


Formalin fixed paraffin embedded human tonsil stained with CD25 antibody.

**CD25/IL-2R  $\alpha$**   

<b>Catalog No.:</b>	Mob254 Concentrated PDM144 Prediluted
<b>Clone:</b>	IL2R.1
<b>Immunogen:</b>	BALB/C mice were injected with recombinant human interleukin-2 receptor.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to a 55 kDa protein known as interleukin 2-receptor  $\alpha$  (IL-2R  $\alpha$ ). IL-2R  $\alpha$  is over expressed on the surface of activated T cells, HTLV-1 or HTLV-2 positive T cell lines, and moderately expressed on activated B cells, NK-cells, and macrophages.

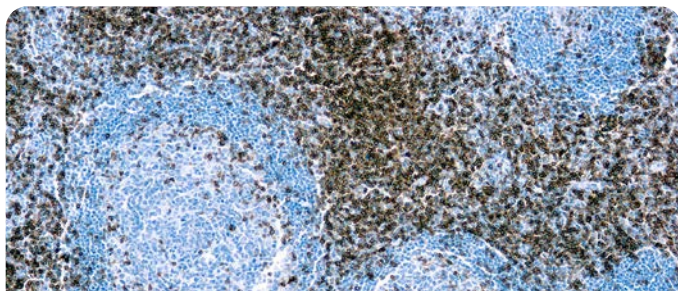


Formalin fixed paraffin embedded human Tonsil stained with CD3.

**CD3**  

<b>Catalog No.:</b>	Mob422 Concentrated PDM422 Prediluted
<b>Clone:</b>	F7.2.38
<b>Immunogen:</b>	Full length native protein (Purified) (Human)
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell Membrane, Cytoplasmic

CD3 is first detectable in early thymocytes, and its appearance probably represents one of the earliest signs of commitment to T cell lineage. In cortical thymocytes, the antigen is predominantly present as an intracytoplasmic constituent. This antibody labels CD3 $\epsilon$  and is a useful tool for the identification of T cells and related neoplasms.

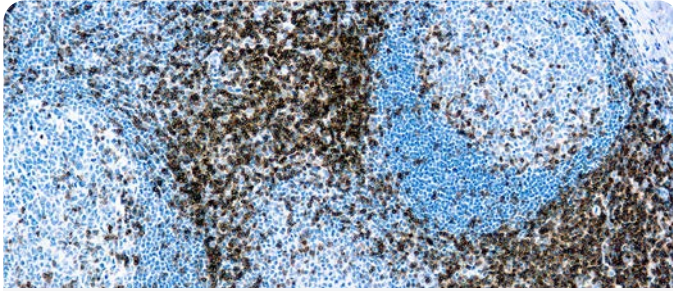


Formalin fixed paraffin embedded human tonsil stained with CD3

**CD3**  

<b>Catalog No.:</b>	RMAB005 Concentrated RMPD005 Prediluted
<b>Clone:</b>	SP7
<b>Immunogen:</b>	A synthetic 13-mer peptide corresponding to aa 156-168 of the $\epsilon$ chain of human CD3 protein.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

The CD3 antigen is present on early thymocytes and mature T cells and is generally regarded as a pan-T cell marker. This antibody will help detect CD3 expression in normal and neoplastic tissues. This antibody reacts with the intracytoplasmic portion of the CD3 antigen expressed by T cells. It stains human T cells in both the cortex and medulla of the thymus and in peripheral lymphoid tissues. This antibody is suitable for staining normal and neoplastic T cells in formalin-fixed, paraffin-embedded tissues.

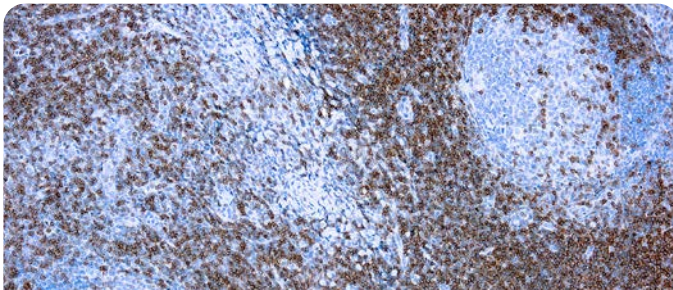


Formalin fixed paraffin embedded human Tonsil stained with CD3.

**CD3**

<b>Catalog No.:</b>	Mob474 Concentrated PDM186 Prediluted
<b>Clone:</b>	LN10
<b>Immunogen:</b>	Prokaryotic recombinant protein corresponding to C terminal region of CD3
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell Membrane

The Clone LN10 is specific for the non-glycosylated epsilon chain of the human CD3 molecule. Clone LN10 recognizes T cells in thymus, bone marrow, peripheral lymphoid tissue and blood and is a pan T cell marker. The CD3 molecule consists of five different polypeptide chains with molecular weights ranging from 16 to 28 kD. The CD3 antigen is first detected in early thymocytes, and its appearance probably represents one of the earliest signs of commitment to the T cell lineage.

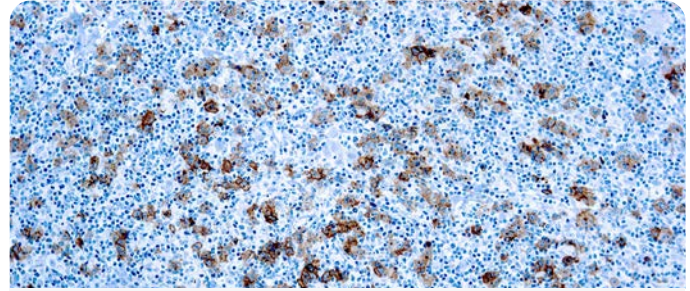


Formalin fixed paraffin embedded human Tonsil stained with CD3.

**CD3**

<b>Catalog No.:</b>	RP005 Concentrated PDR002 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Synthetic human CD3 polypeptide conjugated to bovine serum albumin.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell Membrane

This antibody reacts with intracytoplasmic portion of the CD3 antigen on the T cells. It stains T cells in cortex as well as medulla of the thymus and lymphoid tissues. This antibody also labels T cell neoplasm, malignant histiocytes and Reed-Sternberg cells in Hodgkin disease.

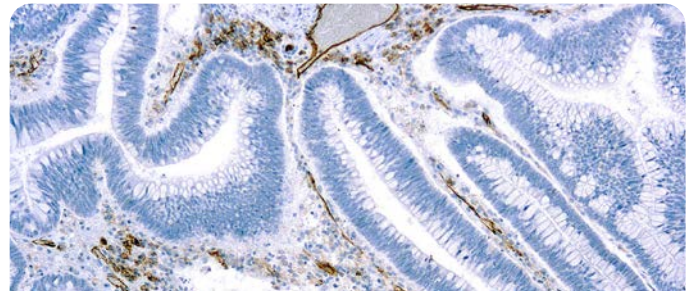


Formalin fixed paraffin embedded human Hodgkin's Lymphoma stained with CD30 antibody.

**CD30/Ki-1 Antigen**

<b>Catalog No.:</b>	Mob032 Concentrated PDM018 Prediluted
<b>Clone:</b>	Ber-H2
<b>Immunogen:</b>	BALB/C mice were immunized with L428 cell line.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil, Hodgkin's Lymphoma
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a 105 kDa glycoprotein expressed by Hodgkin and Reed-Sternberg cells and by tumor cells of a majority of large cell lymphomas. In normal lymphoid tissues, it reacts with a small population of large cells present around B cell follicles and sometimes at the rim of germinal centers.

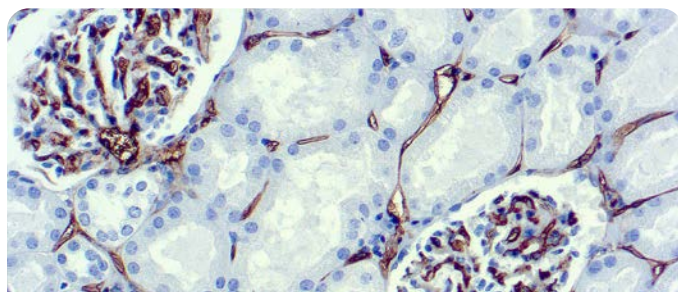


Formalin fixed paraffin embedded human Colon Ca stained with CD31 antibody.

**CD31, Endothelial Cell**

<b>Catalog No.:</b>	Mob034 Concentrated PDM020 Prediluted
<b>Clone:</b>	JC/70A
<b>Immunogen:</b>	BALB/C mice were immunized with membrane preparation of a spleen from a patient with hairy cell leukemia.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil, Colon Ca
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a 100 kDa glycoprotein expressed by endothelial cells and a 130 kDa glycoprotein present in platelets. It stains endothelial cells in normal as well as malignant tissues.

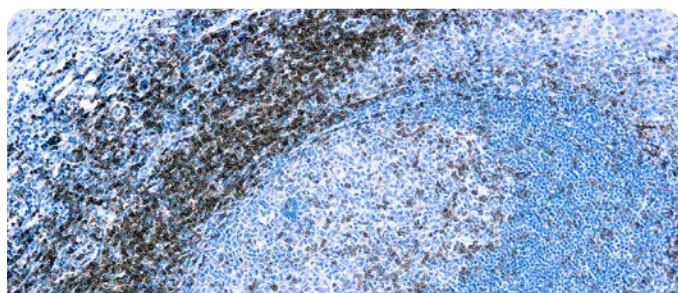


Formalin fixed paraffin embedded human kidney stained with CD34 antibody.

**CD34, Endothelial Cell**  

<b>Catalog No.:</b>	Mob098 Concentrated PDM050 Prediluted
<b>Clone:</b>	QBEND/10
<b>Immunogen:</b>	Endothelial cells (HUVE).
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil, kidney
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a glycoprotein of MW 110 kDa, present on the surface of hematopoietic cells i.e. myeloid and lymphoid progenitors. It stains the vascular endothelial cells.

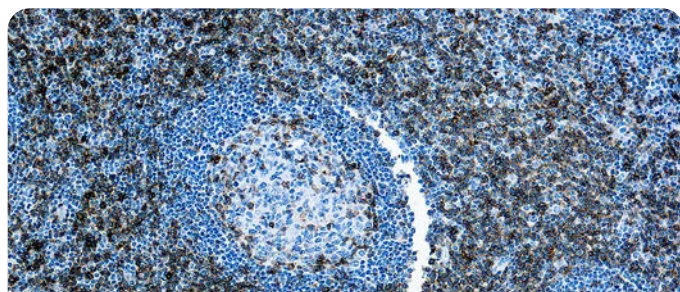


Formalin fixed paraffin embedded human tonsil stained with CD4.

**CD4**  

<b>Catalog No.:</b>	RMA083 Concentrated RMPD083 Prediluted
<b>Clone:</b>	EP204
<b>Immunogen:</b>	Synthetic peptide corresponding to residues of human CD4 protein.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

CD4 is glycoprotein found on the surface of immune cells such as T helper cells, monocytes, macrophages, and dendritic cells. It is co-receptor that assists the T-cell receptor (TCR) with antigen-presenting cell and also interacts directly with MHC class II molecules of the surface of antigen-presenting cells. Most mature T-cell lymphomas are CD4 positive with the exception of aggressive NK-cell leukemia and extranodal NK/T-cell lymphoma. CD4 plays important role in the classification of lymphocytes in inflammatory and malignant lymphomas.

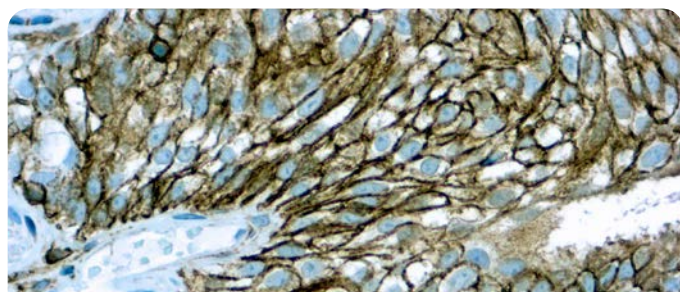


Formalin fixed paraffin embedded human tonsil stained with CD43 antibody.

**CD43, T Cell**  

<b>Catalog No.:</b>	Mob039 Concentrated PDM060 Prediluted
<b>Clone:</b>	DF-T1
<b>Immunogen:</b>	BALB/C mice were immunized with myeloblast cell line KG1.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell Membrane

This antibody reacts with an antigen expressed by normal and neoplastic T cells and myeloid lineage cells. It strongly stains T cells in the interfollicular areas of normal lymphoid tissues.

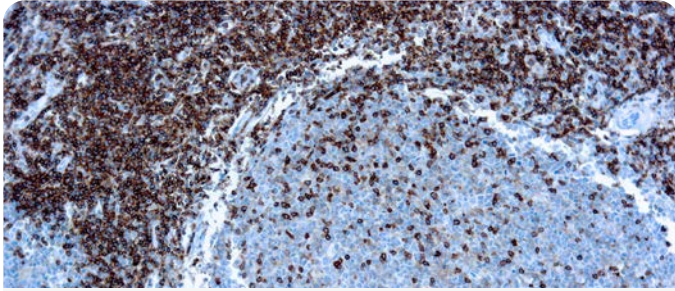


Formalin fixed paraffin embedded human bladder carcinoma stained with CD44, HCAM antibody.

**CD44/HCAM**  

<b>Catalog No.:</b>	Mob256 Concentrated PDM172 Prediluted
<b>Clone:</b>	156-3C11
<b>Immunogen:</b>	BALB/C mice were injected with stimulated human leukocytes.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Tonsil, bladder carcinoma
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to a cell surface glycoprotein of 80-95 kDa, known as CD44. CD44 is expressed on the surface of lymphocytes, monocytes, and granulocytes. This antibody reacts with red cells pretreated with 2-aminoethyl isothiuronium bromide (AET).



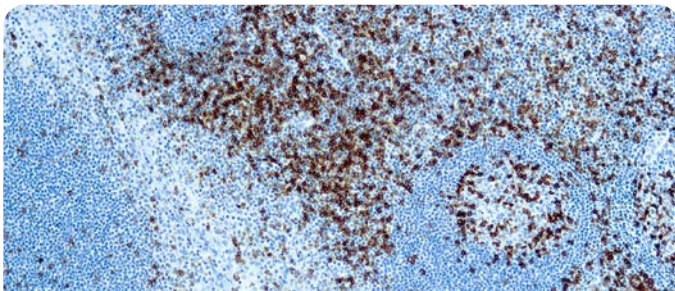
Formalin fixed paraffin embedded human tonsil stained with CD45/LCA antibody.

### CD45, Leukocyte Common Antigen (LCA)



<b>Catalog No.:</b>	Mob040 Concentrated PDM009 Prediluted
<b>Clone:</b>	PD7/26 + 2B11
<b>Immunogen:</b>	BALB/C mice were immunized with human peripheral blood lymphocytes to raise clone PD7/26 and with isolated neoplastic cells from T cell lymphoma to raise clone 2B11.
<b>Isotype:</b>	Both clones, IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

The human leukocyte common antigen is a family of five or more high molecular weight glycoproteins of MW 180, 190, 205 and 220 kDa, present on the surface of the majority of human leukocytes. This antibody labels lymphoid cells. It labels neoplastic B and T cells in non-Hodgkin lymphoma and in leukemias of B and T cell types.



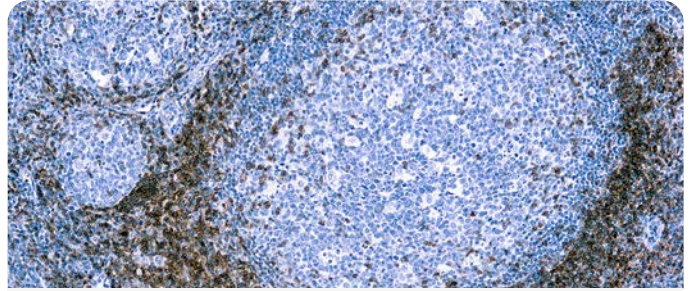
Formalin fixed paraffin embedded human tonsil stained with CD45RO antibody.

### CD45RO, T Cell



<b>Catalog No.:</b>	Mob043 Concentrated PDM015 Prediluted
<b>Clone:</b>	UCHL1
<b>Immunogen:</b>	BALB/C mice were immunized with IL-2 dependent T cell line, CA1.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a 180 kDa glycoprotein of the CD45 family, found on most thymocytes and activated T cells but only on a portion of the resting T cells. It reacts with most thymocytes, a subpopulation of resting cells within both the CD4 and CD8 subsets and mature activated T cells.



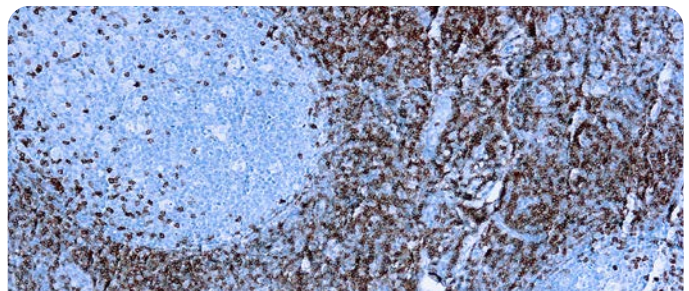
Formalin fixed paraffin embedded human tonsil stained with CD5

### CD5



<b>Catalog No.:</b>	Mob589 Concentrated PDM589 Prediluted
<b>Clone:</b>	54/F6
<b>Immunogen:</b>	Recombinant prokaryotic fusion protein corresponding to the external domain of the CD5 molecule.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to CD5 antigen. It stains a cell surface glycoprotein of 67 kDa present on 95% of thymocytes and 72% of peripheral blood lymphocytes. CD5 is expressed by many T cell leukemias, lymphomas, and activated T cells. This antibody can be used for the detection of T cell acute lymphocytic leukemias.



Formalin fixed paraffin embedded human tonsil stained with CD5

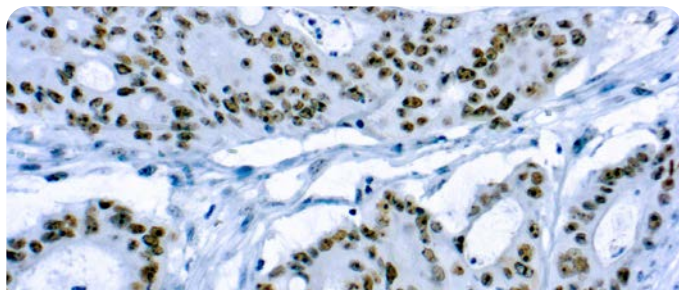
### CD5



<b>Catalog No.:</b>	RMAB011 Concentrated RMPD011 Prediluted
<b>Clone:</b>	SP19
<b>Immunogen:</b>	Synthetic peptide from the intracellular region of CD5.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

CD5 is expressed by many T cell leukemias, lymphomas, and activated T cells. Occasionally, CD5 antigen is also expressed on a subset of B cells. Mantle cell lymphomas (same as diffuse centrocytic lymphomas) are CD5(+) while the follicle center cell lymphoma are CD5(-).



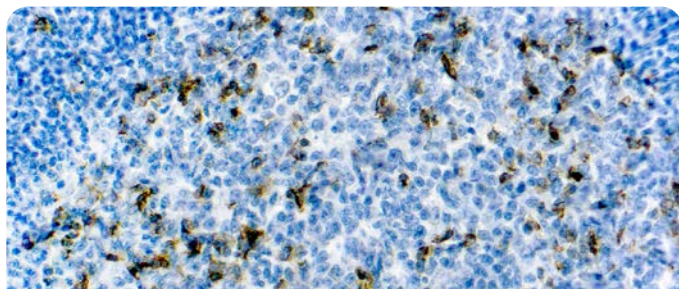


Formalin fixed paraffin embedded human colon carcinoma stained with CD56/NCAM-1 antibody.

**CD56/Neural Cell Adhesion Molecule-1 (NCAM-1)**  

<b>Catalog No.:</b>	Mob261 Concentrated PDM110 Prediluted
<b>Clone:</b>	123C3.D5
<b>Immunogen:</b>	BALB/C mice were injected with membrane preparation of a small cell lung carcinoma.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Neuroblastoma
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to two proteins of 185 kDa and 145 kDa, identified as two isoforms of neural cell adhesion molecules (NCAM/CD56). NCAM is expressed on most neuroectodermal derived cell lines, tissues, and neoplasms such as retinoblastoma, medulloblastoma, astrocytoma, and neuroblastoma.

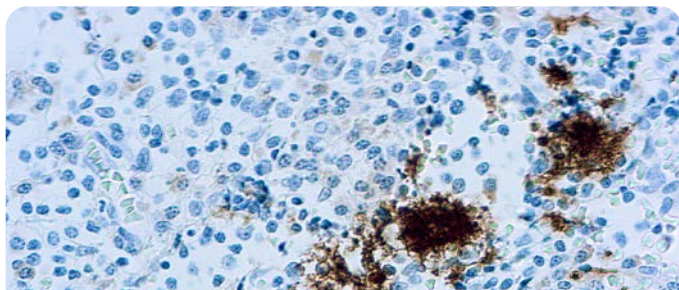


Formalin fixed paraffin embedded human tonsil stained with CD57 antibody.

**CD57**  

<b>Catalog No.:</b>	Mob163 Concentrated PDM130 Prediluted
<b>Clone:</b>	NK-1
<b>Immunogen:</b>	Human peripheral blood mononuclear cells.
<b>Isotype:</b>	IgM
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to a 110kDa human CD57 myeloid associated glycoprotein. It stains mononuclear cells with natural killer activity, neuroendocrine cells, and their tumors.

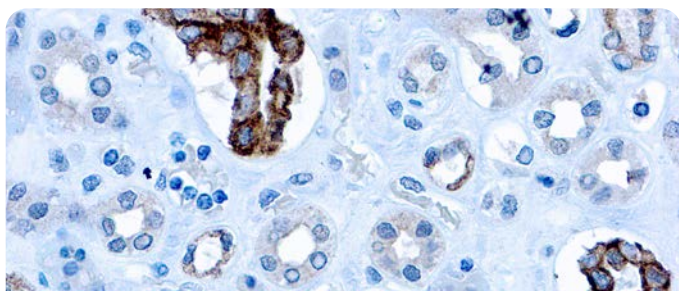


Formalin fixed paraffin embedded human tonsil stained with CD61 antibody.

**CD61/Platelet Glycoprotein IIIa**  

<b>Catalog No.:</b>	Mob164 Concentrated PDM064 Prediluted
<b>Clone:</b>	Y2/51
<b>Immunogen:</b>	BALB/C mice were immunized with PHA-stimulated human mononuclear cells.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody recognizes a glycoprotein of 110 kDa molecular weight present on human platelets and also reacts with megakaryocytes and megakaryoblasts. The antigen is also present on endothelium and osteoclasts. The glycoprotein IIIa molecule produced by endothelium cells is identical in sequence to platelet glycoprotein IIIa.

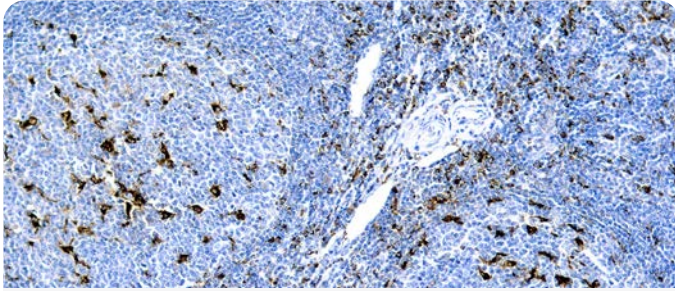


Formalin fixed paraffin embedded human kidney stained with CD63 antibody.

**CD63**  

<b>Catalog No.:</b>	Mob301 Concentrated
<b>Clone:</b>	NKI/C3 (same as MX-49.129.5)
<b>Immunogen:</b>	Smooth plasma membrane fraction of MeWo cells.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 53 kDa protein, expressed on activated platelets. CD63 is a lysosomal membrane glycoprotein that is translocated to plasma membrane after platelet activation. It is also expressed on granulocytes, B cells, and T cells.

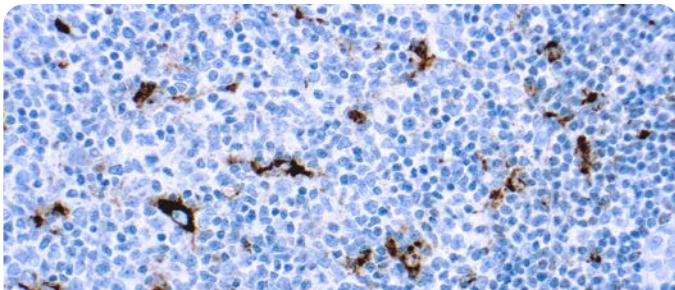


Formalin fixed paraffin embedded human tonsil stained with CD68 Macrophage.

**CD68, Macrophage**

<b>Catalog No.:</b>	Mob167 Concentrated PDM066 Prediluted
<b>Clone:</b>	KP1
<b>Immunogen:</b>	Subcellular fraction of human alveolar macrophages.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to macrophages in a wide variety of human tissues. It reacts with myeloid precursors and peripheral blood granulocytes. It also stains a cell population known as plasmacytoid T cells.

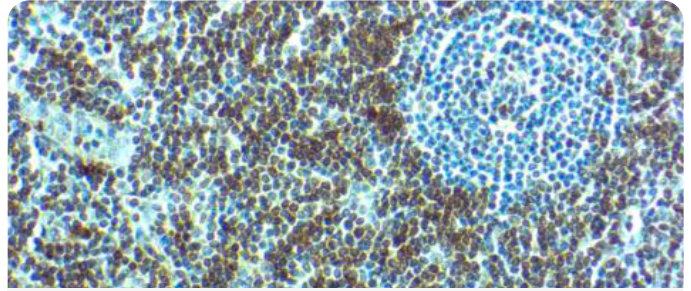


Formalin fixed paraffin embedded human tonsil stained with CD68 antibody.

**CD68/Macrophage**

<b>Catalog No.:</b>	Mob094 Concentrated PDM065 Prediluted
<b>Clone:</b>	PG-M1
<b>Immunogen:</b>	BALB/C mice were immunized with Gaucher's cells.
<b>Isotype:</b>	IgG3, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a glycoprotein of 110 kDa, expressed as an intracytoplasmic molecule. It stains macrophages in a wide variety of tissues. Myeloid precursor cells and peripheral granulocytes are negative. The PG-M1 differs from EMB11 (CD68) because of its non-reactivity with granulocytes and their precursor cells.

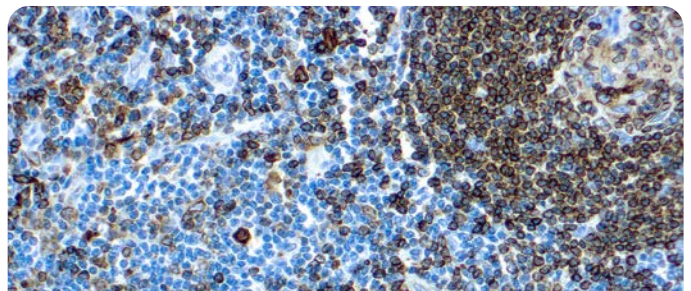


Formalin fixed paraffin embedded human tonsil tissue stained with CD7

**CD7**

<b>Catalog No.:</b>	Mob599 Concentrated PDM599 Prediluted
<b>Clone:</b>	CBC.37.80
<b>Immunogen:</b>	a T lymphoblastoid cell line, established from a patient with acute lymphoblastic leukemia
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell surface/membrane

CD7 is expressed by most peripheral blood T cells, NK cells, and all thymocytes. It is one of the earliest surface antigens on T and NK-cell lineages. The antibody is a useful aid for classification of T-cell malignancies.

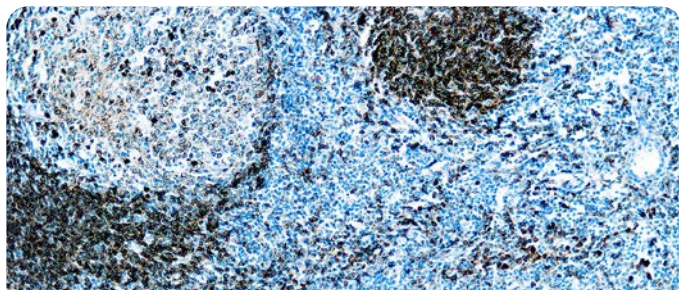


Formalin fixed paraffin embedded human tonsil stained with CD74 antibody.

**CD74, Lymphoid Marker**

<b>Catalog No.:</b>	Mob168 Concentrated PDM033 Prediluted
<b>Clone:</b>	LN2
<b>Immunogen:</b>	SU-DHL-4 lymphoma cells.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to CD74. This antibody can be used for the identification of B cell lymphomas and leukemias. It also stains activated neoplastic cells in T cell lymphomas and Reed-Sternberg cells.

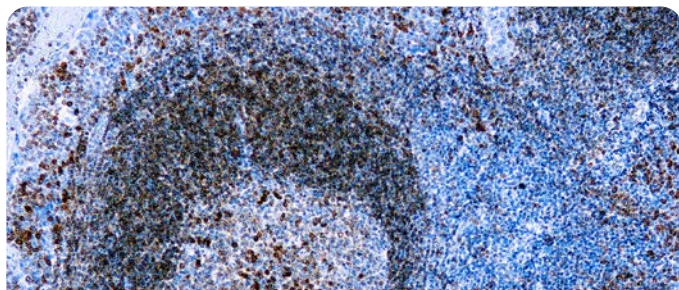


Formalin fixed paraffin embedded human tonsil stained with CD79a Antigen.

**CD79a, Antigen**  **IVD**

<b>Catalog No.:</b>	Mob242 Concentrated PDM125 Prediluted
<b>Clone:</b>	HM47/A9
<b>Immunogen:</b>	Synthetic polypeptide consisting of the amino acid sequence GTYQDVGSLNIADVQ.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to human CD79a antigen complex, consisting of two polypeptides non-covalently associated with membrane-bound immunoglobulins on B cells. This complex of polypeptide and immunoglobulins constitute the B cell antigen receptor. The two components of this complex are designated CD79a and CD79b. The CD79a antigen appears at the pre-B cell stage, early in maturation and persists until the plasma cell stage. The CD79a antigen is found in majority of acute leukemias of precursor B cell type, in B cell lines, and B cell lymphomas.

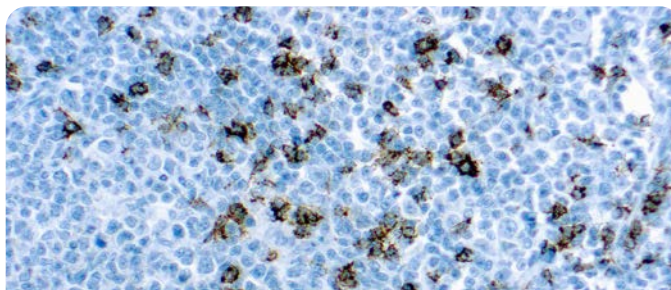


Formalin fixed paraffin embedded human tonsil stained with CD79a antibody.

**CD79a, B Cell**  **IVD**

<b>Catalog No.:</b>	Mob118 Concentrated PDM271 Prediluted
<b>Clone:</b>	HM57
<b>Immunogen:</b>	Synthetic peptide comprising of 202-216 C terminal amino acids part of mb-1 protein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts specifically with B cells at the pre B cell stage. It stains a majority of acute leukemias of precursor B cell type, B cell lymphomas, and some myelomas. The mb-1 polypeptide along with B29 polypeptide forms an antigen receptor complex on the B cell, performing signal transduction and phosphorylation functions.

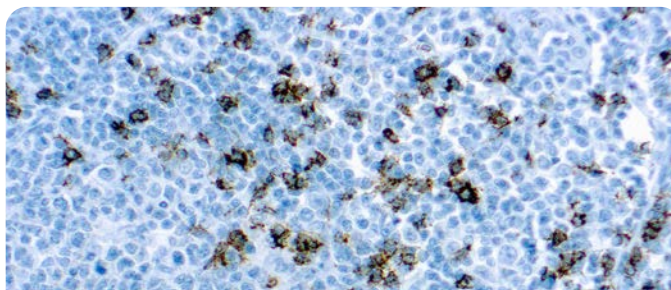


Formalin fixed paraffin embedded human tonsil stained with CD8

**CD8**  **IVD**

<b>Catalog No.:</b>	Mob117 Concentrated PDM094 Prediluted
<b>Clone:</b>	144B
<b>Immunogen:</b>	Synthetic peptide comprised of 13 C terminal amino acids from the cytoplasmic domain of the CD8 molecule.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts specifically with a 32 kDa protein similar to the CD8 molecule. This antibody stains cytotoxic/suppressor T cells and shows staining patterns similar to clustered CD8 monoclonal antibodies.

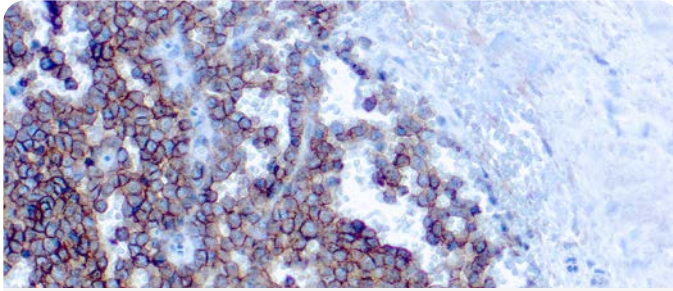


Formalin fixed paraffin embedded human tonsil stained with CD8

**CD8**  **IVD**

<b>Catalog No.:</b>	RMAB012 Concentrated RMPD012 Prediluted
<b>Clone:</b>	SP16
<b>Immunogen:</b>	Synthetic peptide sequence comprising the 13 C-terminal amino acids of the cytoplasmic domain of the CD8 a chain.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody recognizes the CD8. The CD8 molecule consists of two chains,  $\alpha$  and  $\beta$ , which are expressed as a disulphide-linked  $\alpha/\beta$  heterodimer or as an  $\alpha/\alpha$  homodimer on T cell subset, thymocytes, and NK cells. The majority of CD8+ T cells express CD8 as  $\alpha/\beta$  heterodimer. CD8 functions as a coreceptor in concert with TCR for binding the MHC class I/peptide complex. The HIV-2 envelope glycoprotein binds CD8  $\alpha$  chain (but not  $\beta$  chain).

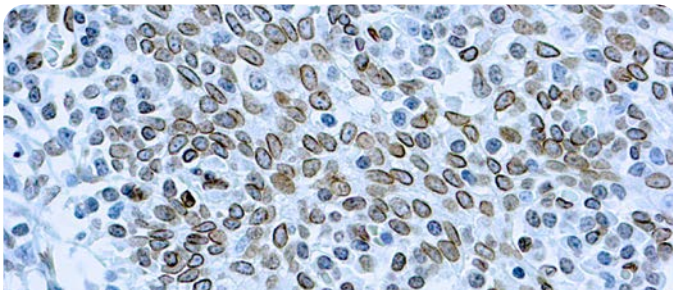


Formalin fixed paraffin embedded human Ewing's sarcoma stained with CD99.

**CD99**

<b>Catalog No.:</b>	Mob262 Concentrated PDM106 Prediluted
<b>Clone:</b>	HO36-1.1
<b>Immunogen:</b>	BALB/C mice were injected with purified E-rosette forming cells from human peripheral blood lymphocytes.
<b>Isotype:</b>	IgM
<b>Positive Control:</b>	Ewing's sarcoma
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to a sialoglycoprotein of 27-32 kDa known as CD99 or MIC2 gene product. CD99 is expressed on the cell membrane of some lymphocytes, cortical thymocytes and granulosa cells of the ovary, Sertoli cells of the testis, pancreatic islet cells and some endothelial cells. Mature granulocytes express very little or no CD99.

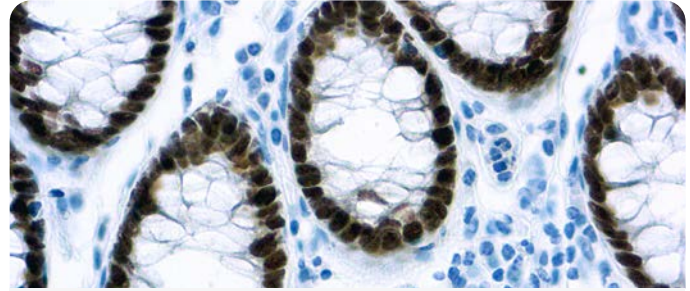


Formalin fixed paraffin embedded human tonsil stained with Cdc25A antibody.

**Cdc25A**

<b>Catalog No.:</b>	Mob337 Concentrated
<b>Clone:</b>	DCS-120
<b>Immunogen:</b>	BALB/C mice were injected with purified recombinant Cdc25A.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear membrane

This antibody reacts with a 65 kDa protein known as Cdc25A. The activity of cyclin-dependent kinases in cell cycle is regulated by the phosphorylation status, which is controlled by the antagonistic action of wee 1 kinase and Cdc25 phosphatases. Three Cdc25 genes are present in human cells: Cdc25A, Cdc25B and Cdc25C. Cdc25A and Cdc25B are expressed throughout the cell cycle, with peak expression in G1 for Cdc25A and in both G1-S phase and G2 for Cdc25B. Cdc25C is mainly expressed in G2 phase.

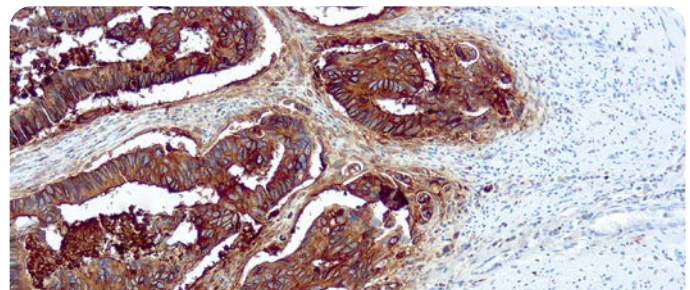


Formalin fixed paraffin embedded colon carcinoma stained with CDX2 antibody.

**CDX2**

<b>Catalog No.:</b>	RMAB059 Concentrated RMPD059 Prediluted
<b>Clone:</b>	EP25
<b>Immunogen:</b>	A synthetic peptide corresponding to residues near the C-term of human Cdx2 protein.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Colon, colon adenocarcinoma
<b>Cellular Localization:</b>	Nuclear

The caudal-related homeodomain protein 2, Cdx2, is a transcription factor expressed in the intestine and is thought to play an important role in proliferation and differentiation of intestinal epithelial cells. In human colorectal cancer, the expression of both Cdx2 and carbonic anhydrase 1, a gene regulated by Cdx2, is reduced or absent. Cdx2 is one of the important regulators in defining pathways for coordinate control of drug metabolism in the gastrointestinal tract.

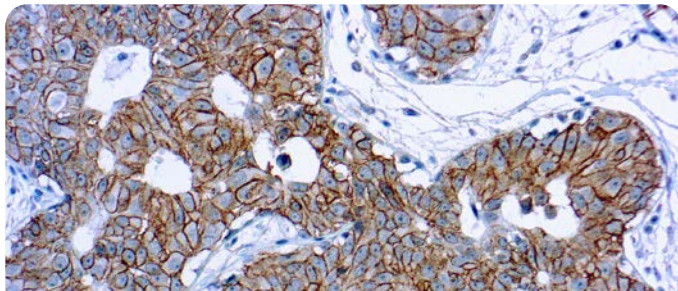


Formalin fixed paraffin embedded human colon Ca stained with CEA antibody.

**CEA (Carcinoembryonic Antigen)**

<b>Catalog No.:</b>	Mob008 Concentrated PDM005 Prediluted
<b>Clone:</b>	COL-1
<b>Immunogen:</b>	BALB/C mice were injected with extract of colon carcinoma cells.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Colon Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and luminal membrane

This antibody is a member of a family of complex antigens which also includes non-specific cross-reacting antigens (NCA). This antibody stains specific regions of CEA. It reacts with colorectal adenocarcinomas but does not show any staining with polymorphonuclear neutrophils and erythrocytes.

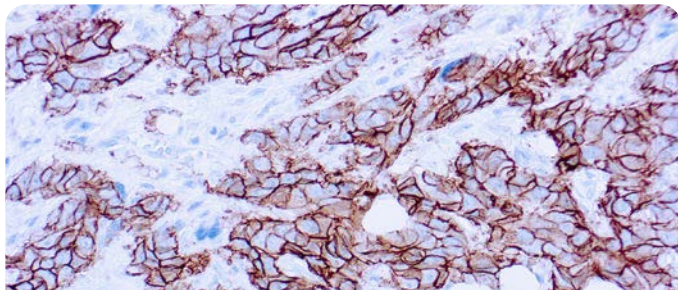


Formalin fixed paraffin embedded human breast carcinoma stained with c-erbB-2 antibody.

**c-erbB-2/Oncoprotein**  **IVD** **RUO**

<b>Catalog No.:</b>	RMAB008, RMAB008R - Concentrated RMPD008, RMPD008R - Prediluted
<b>Clone:</b>	SP3
<b>Immunogen:</b>	Recombinant protein encoding extracellular domain of human c-erbB2.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cell membrane

This antibody recognizes a c-erbB-2 protein, which is a receptor tyrosine kinase of the c-erbB family. It is closely related in structure to the epidermal growth factor receptor. c-erbB-2 oncoprotein is detectable in a subset of breast and other adenocarcinomas, as well as transitional cell carcinomas. In the case of breast cancer, expression determined by immunohistochemistry has been shown to be associated with poor prognosis.

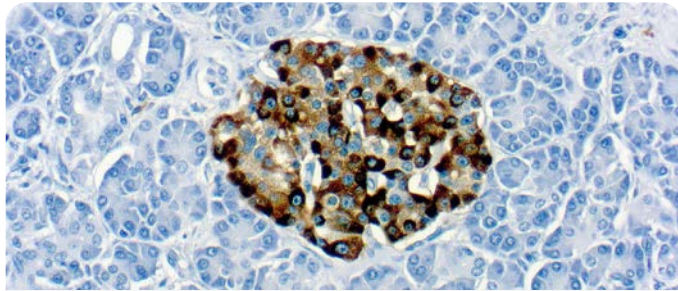


Formalin fixed paraffin embedded human breast carcinoma stained with c-erbB-2 antibody.

**c-erbB-2/Oncoprotein**  **IVD** **RUO**

<b>Catalog No.:</b>	RP006, RP006R - Concentrated PDR003, PDR003R - Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Keyhole limpet hemocyanin conjugated synthetic human peptide from c-erbB-2 oncoprotein.
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with the c-erbB-2 oncoprotein, a 190 kDa protein. The proto-oncogene for c-erbB-2 is located on the human chromosome 17, band 21. It has structural similarities to EGFR. Several studies have indicated that c-erbB-2 may be a good indicator of the prognosis of human carcinomas in the breast, ovary, uterus and gastrointestinal tract.

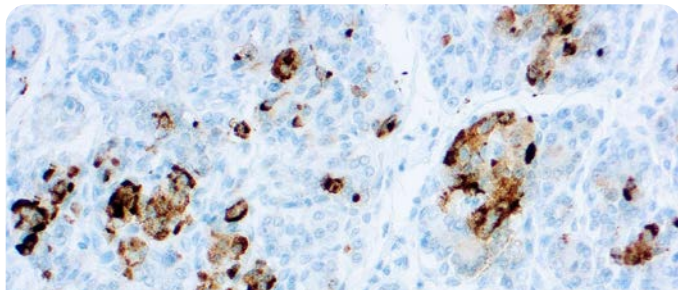


Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody.

**Chromogranin A**  **IVD**

<b>Catalog No.:</b>	Mob048 Concentrated PDM067 Prediluted
<b>Clone:</b>	LK2H10
<b>Immunogen:</b>	BALB/C mice were immunized with human pheochromocytoma.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

Chromogranin A is a 439 amino acid protein present in secretory granules of a wide variety of endocrine cells and neurons. A positive staining is seen in the secretory granules of parathyroid, adrenal medulla, anterior pituitary gland and Langerhans islets of pancreas. This antibody stains a variety of neuroendocrine tumors.

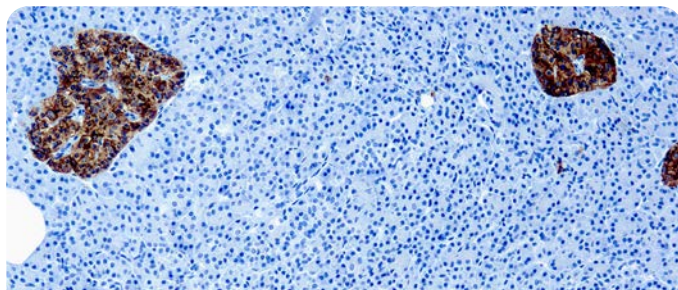


Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody.

**Chromogranin A**  **IVD**

<b>Catalog No.:</b>	RP008 Concentrated PDR061 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	C-terminal half of chromogranin A was purified from urine of patients with carcinoid syndrome.
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with human chromogranin A in the neuroendocrine cells and neural tissues. It does not recognize the epitopes located on the N-terminal half of the chromogranin A molecule.



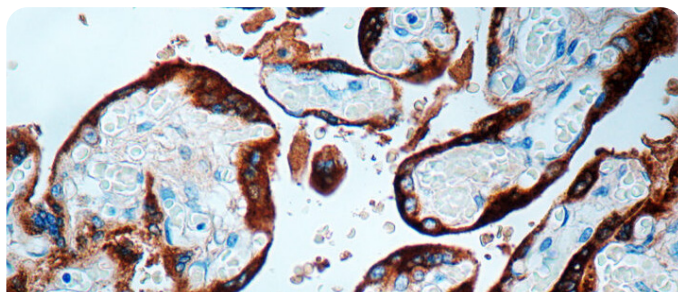
Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody.

### Chromogranin A



<b>Catalog No.:</b>	RMAB015 Concentrated RMPD015 Prediluted
<b>Clone:</b>	SP12
<b>Immunogen:</b>	Recombinant protein encoding human Chromogranin A.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes Chromogranin A. Chromogranin A (a protein of 439 amino acid which is encoded on chromosome 14) is present in neuroendocrine cells throughout the body, including the neuroendocrine cells of the large and small intestine, adrenal medulla and pancreatic islets. It is an excellent marker for carcinoid tumors, pheochromocytomas, paragangliomas, and other neuroendocrine tumors. Coexpression of chromogranin A and neuron specific enolase (NSE) is common in neuroendocrine neoplasms.



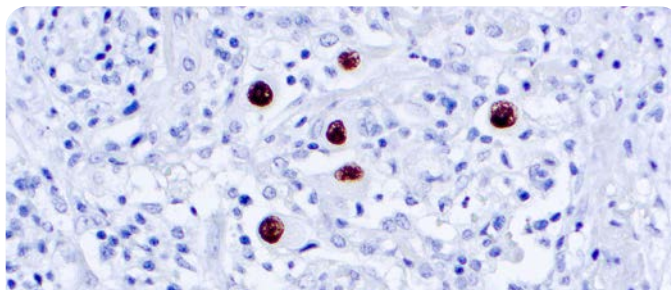
Formalin fixed paraffin embedded human placenta stained with Chorionic Gonadotropin (hCG) antibody.

### Chorionic Gonadotropin (hCG)



<b>Catalog No.:</b>	RP007 Concentrated PDR030 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	$\beta$ chain of human chorionic gonadotropin
<b>Positive Control:</b>	Placenta
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with hCG. It stains strongly with the human placenta and placental trophoblasts.



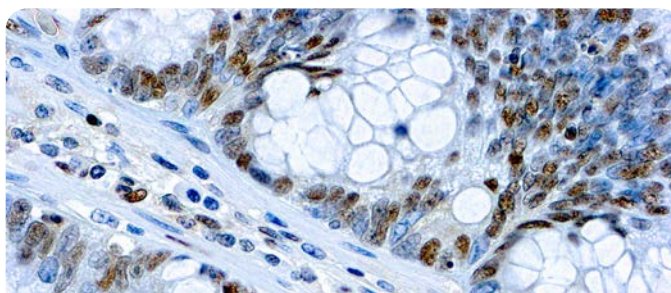
Formalin fixed paraffin embedded human infected tissue stained with CMV antibody.

### CMV Cocktail



<b>Catalog No.:</b>	Mob049R Concentrated PDM075R Prediluted
<b>Clone:</b>	DDG9 + CCH2
<b>Immunogen:</b>	BALB/C mice were immunized with cytomegalovirus infected cell lysate.
<b>Isotype:</b>	DDG9, IgG2a, kappa; CCH2, IgG1, kappa
<b>Positive Control:</b>	Infected lung
<b>Cellular Localization:</b>	Nuclear

This cocktail antibody stains infected cells giving a nuclear staining pattern with an immediate early and an early CMV antigen.



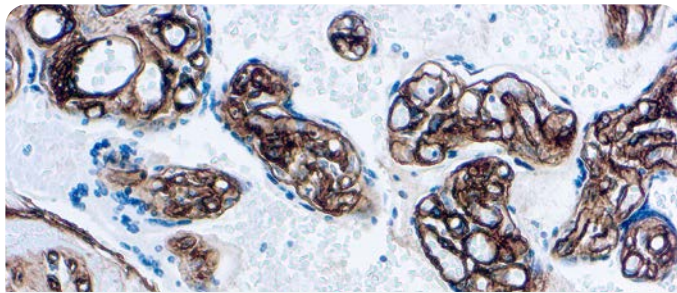
Formalin fixed paraffin embedded human colon adenocarcinoma stained with c-myc.

### c-myc



<b>Catalog No.:</b>	Mob231 Concentrated PDM211 Prediluted
<b>Clone:</b>	9E10
<b>Immunogen:</b>	Synthetic peptide corresponding to residues 408-439 of the human p62c-myc protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody recognizes an epitope located in the amino acid residue 410-419 of human oncogene product c-myc. This antibody reacts with both components of the p62 and p64 c-myc.

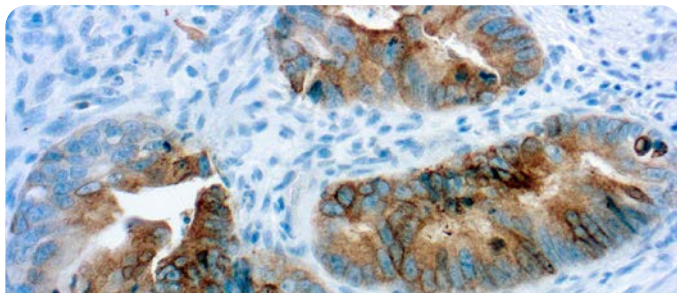


Formalin fixed paraffin embedded human placenta stained with Collagen Type IV antibody.

**Collagen Type IV**  

<b>Catalog No.:</b>	Mob229 Concentrated PDM276 Prediluted
<b>Clone:</b>	COL-94
<b>Immunogen:</b>	Human collagen type IV.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Basement membrane

This antibody recognizes collagen type IV epitope located on the  $\alpha 1$  and/or  $\alpha 2$  chains of human collagen type IV. This antibody shows no cross-reactivity with collagen types I, II, III, V, VI and VII and does not react with human vitronectin, fibronectin or chondroitin sulfate A, B and C.

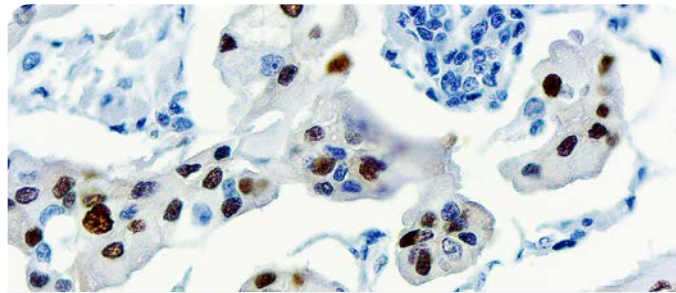


Formalin fixed paraffin embedded colon carcinoma stained with COX-2 antibody.

**COX-2 (Cyclooxygenase-2)**  

<b>Catalog No.:</b>	RP111 Concentrated
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Recombinant protein corresponding to C-terminus of rat COX2.
<b>Positive Control:</b>	Lung and colon carcinoma
<b>Cellular Localization:</b>	Cytoplasmic, membrane

This antibody reacts with a 70 kDa protein. COX-2 (Cyclooxygenase-2) is an inducible enzyme. It is involved in the response of cells to growth factors, tumor promoters and cytokines that induce its expression. COX-2 expression markedly increased in 85-90% of human colorectal adenocarcinoma whereas COX-1 levels remained unchanged.

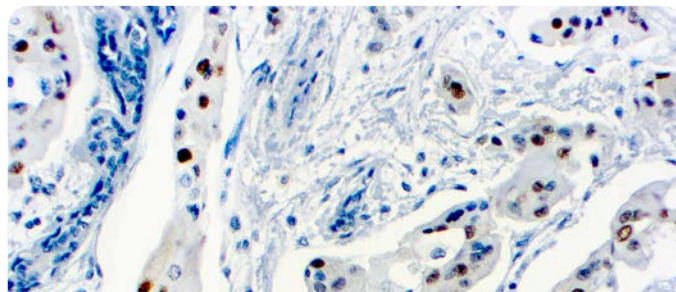


Formalin fixed paraffin embedded human Breast Carcinoma stained with Cyclin D1.

**Cyclin D1**  

<b>Catalog No.:</b>	RMAB106 Concentrated RMPD106 Prediluted
<b>Clone:</b>	EP12
<b>Immunogen:</b>	A synthetic peptide corresponding to residues near C terminus of human Cyclin D1 protein.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Breast Carcinoma
<b>Cellular Localization:</b>	Nuclear

Cyclin D1 belongs to the Cyclin D family. Cyclin D1 is required for the cell cycle G1/S transition. Amplification or overexpression of Cyclin D1 plays a pivotal role in the development of various human cancers including breast cancer, colon cancer, melanoma, prostate cancer, and lymphoma. It is useful to differentiate mantle cell lymphoma from small, cleaved cell lymphoma. Rabbit monoclonal antibodies to Cyclin D1 showed the highest sensitivity to detect this antigen in formalin fixed paraffin embedded tissue as compared to several other clones.

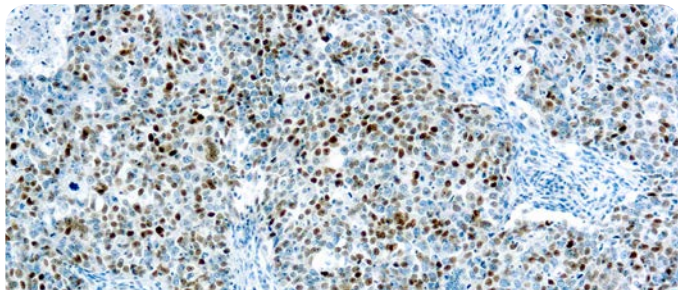


Formalin fixed paraffin embedded human Breast stained with Cyclin D1.

**Cyclin D1**  

<b>Catalog No.:</b>	RMAB003 Concentrated RMPD003 Prediluted
<b>Clone:</b>	SP4
<b>Immunogen:</b>	A synthetic peptide from C-terminus of human cyclin D1.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

Cyclin D1 or PRAD-1 or bcl-1 is one of the key cell cycle regulators, and functions in association with cdk4 and/or cdk6 by phosphorylating the Rb protein. It is a putative proto-oncogene overexpressed in a wide variety of human neoplasms including mantle cell lymphomas (MCL).



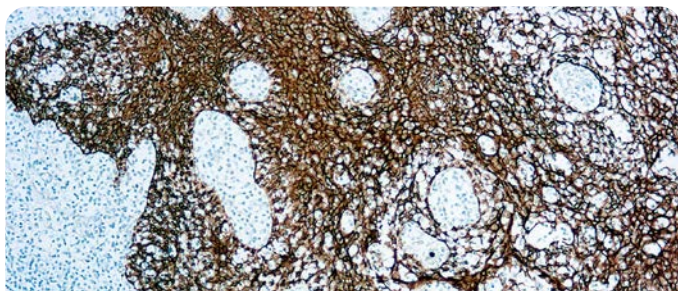
Formalin fixed paraffin embedded human breast Ca. stained with Cyclin E antibody.

### Cyclin E Protein



<b>Catalog No.:</b>	Mob266 Concentrated PDM145 Prediluted
<b>Clone:</b>	HE12
<b>Immunogen:</b>	Synthetic peptide corresponding to human cyclin E protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody recognizes a doublet of 50 kDa and a single band of 42 kDa identified as cyclin E. Cyclin proteins are a family of related proteins, which control the progression of the eukaryotic cell cycle. Overexpression of cyclin E shortens the length of the G1 phase, accelerating progression of S phase. The activity of cyclin E is mediated through its activation of cyclin dependent kinase 2 (cdk2) protein and is modulated by the presence of tumor suppressor proteins such as p16.



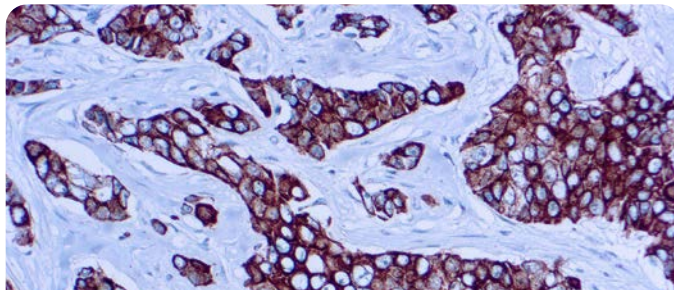
Formalin fixed paraffin embedded human tonsil stained with Cytokeratin antibody.

### Cytokeratin



<b>Catalog No.:</b>	Mob052 Concentrated PDM116 Prediluted
<b>Clone:</b>	MNF116
<b>Immunogen:</b>	BALB/C mice were immunized with crude extract of splenic cells from a nude mouse engrafted with MCF-7 cells.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes cytokeatin polypeptides ranging from 40 through 58kDa, corresponding to cytokeatins 5, 6, 8, 17 and 19. It shows a broad pattern of reactivity with human epithelial tissues from simple glandular epithelia to stratified squamous epithelia, like epidermis, mammary gland ducts and tracheal epithelium.



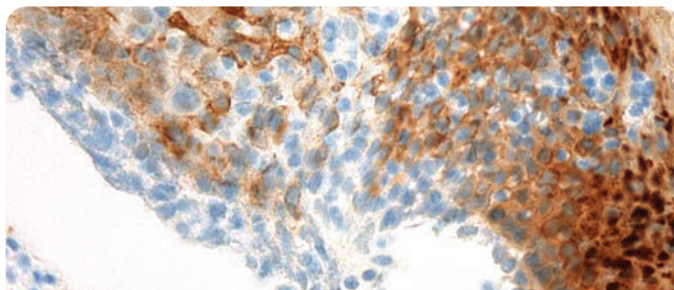
Formalin fixed paraffin embedded human breast tissue stained with Cam 5.2.

### Cytokeratin (CAM 5.2)



<b>Catalog No.:</b>	Mob469 Concentrated PDM181 Prediluted
<b>Clone:</b>	CAM 5.2
<b>Immunogen:</b>	Anti-Cytokeratin, clone CAM 5.2, is derived from hybridization of mouse P3/NS-1/1-Ag4-1myeloma cells with spleen cells from BALB/c mice immunized with the human colorectal carcinoma cell line HT29.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Lung, colon, prostate and breast tissue.
<b>Cellular Localization:</b>	Cytoplasmic.

Anti-Cytokeratin (CAM 5.2) reagent has a primary reactivity with human keratin proteins that correspond to Moll's peptides #7 and #8, Mr 48 and 52 kDa (kd), respectively. Anti-Cytokeratin (CAM 5.2) stains most epithelial-derived tissue, including: liver, renal tubular epithelium, hepatocellular and renal cell carcinomas.



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 13 antibody.

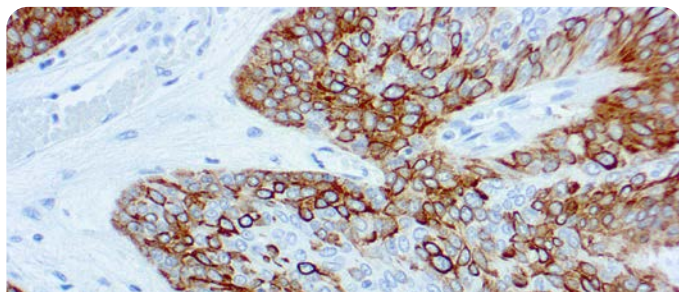
### Cytokeratin 13



<b>Catalog No.:</b>	Mob443 Concentrated
<b>Clone:</b>	KS-1A3
<b>Immunogen:</b>	Cultured A431 cells from a human epidermoid carcinoma of the vulva.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 54 kDa protein. Cytokeratin 13 belongs to the type A (acidic) subfamily of low molecular weight cytokeatins and exists in combination with cytokeatin 4. Cytokeratin 13 is expressed in squamous, non-keratinized epithelium, transitional epithelium and myoepithelium. This antibody is useful for the identification of carcinomas of trachea, sweat glands, bladder, ectocervix, tongue, esophagus, anal canal and the basal layer of keratinized epidermis.



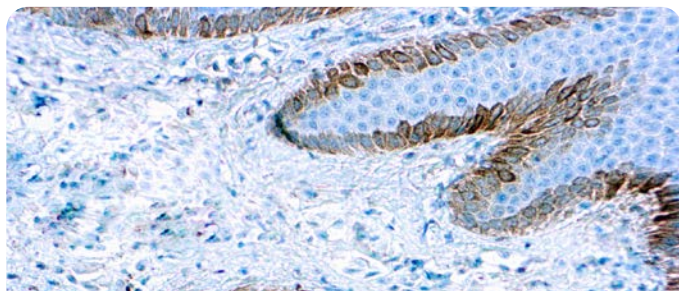


Formalin fixed paraffin embedded lung squamous cell carcinoma stained with Cytokeratin 14 antibody.

**Cytokeratin 14**  

<b>Catalog No.:</b>	Mob186 Concentrated PDM138 Prediluted
<b>Clone:</b>	LL002
<b>Immunogen:</b>	A synthetic peptide of 15 aa residues from the C-terminus of human keratin 14.
<b>Isotype:</b>	IgG3
<b>Positive Control:</b>	Skin, Squamous Cell Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 50 kDa cytoke­ratin protein designated cytoke­ratin 14. Cytoke­ratin 14 belongs to the type A (acidic) subfamily of low molecular weight cytoke­ratins and exists in combination with cytoke­ratin 15. This antibody can be used to distinguish stratified epithelial cells from simple epithelial cells.

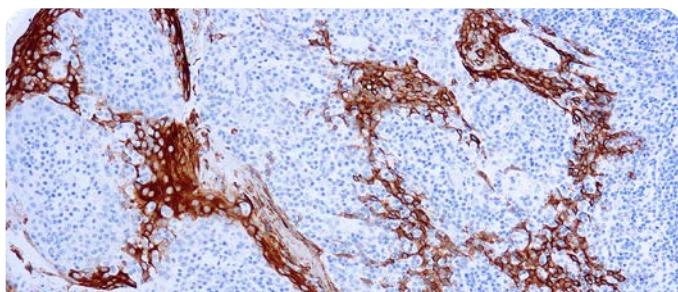


Formalin fixed paraffin embedded human skin stained with Cytokeratin 15 antibody.

**Cytokeratin 15**  

<b>Catalog No.:</b>	Mob305 Concentrated PDM596 Prediluted
<b>Clone:</b>	LHK15
<b>Immunogen:</b>	A 17-mer synthetic peptide from the C-terminus of human cytoke­ratin 15.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

Cytoke­ratin 15 is a type I cytoke­ratin without a defined type II partner. Cytoke­ratin 15 is expressed primarily in the basal keratinocytes of stratified tissues, including the fetal epidermis and fetal nail.

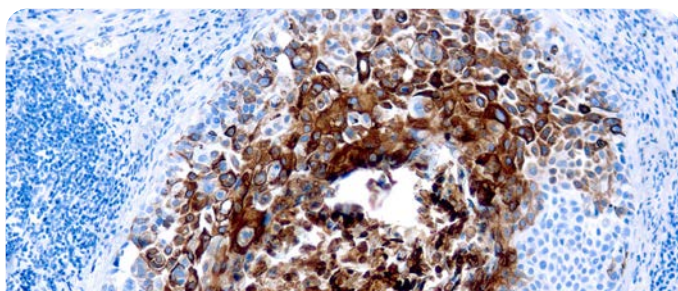


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 16 antibody.

**Cytokeratin 16**  

<b>Catalog No.:</b>	Mob273 Concentrated PDM273 Prediluted
<b>Clone:</b>	LL025
<b>Immunogen:</b>	BALB/C mice were injected with a synthetic peptide from the C-terminus of human cytoke­ratin 16.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skin, Squamous Cell Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a 48 kDa protein, which is identified as cytoke­ratin 16. Cytoke­ratin 16 is expressed in keratinocytes, which are undergoing rapid turnover in the suprabasal region. High concordance was found between the carcinomas immunostaining with the basal cell and the hyperproliferation-related keratins.

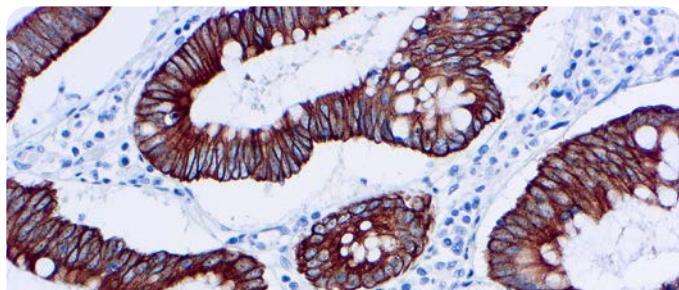


Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin 17 antibody.

**Cytokeratin 17**  

<b>Catalog No.:</b>	Mob127 Concentrated PDM206 Prediluted
<b>Clone:</b>	E3
<b>Immunogen:</b>	Cytoskeletal fraction of rat colon epithelium.
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 46 kDa cytoke­ratin protein designated cytoke­ratin 17. It reacts with basal cells in complex epithelia and reacts strongly with squamous cell carcinomas.

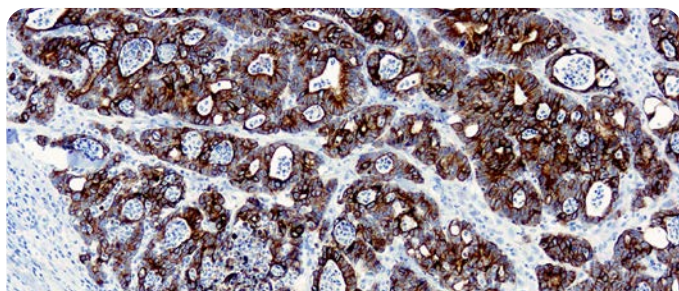


Formalin fixed paraffin embedded human colon carcinoma stained with Cytokeratin 18 antibody.

**Cytokeratin 18**  **IVD**

<b>Catalog No.:</b>	Mob187 Concentrated PDM164 Prediluted
<b>Clone:</b>	DC10
<b>Immunogen:</b>	BALB/C mice were injected with PMC-42 human breast carcinoma cell line.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to human cytokeratin 18 of 45 kDa. Cytokeratin 18 belongs to a family of acidic type A keratins and exists along with cytokeratin 8 in most simple ductal and glandular epithelia. This antibody does not react with squamous epithelium. It reacts with benign and malignant epithelial lesions as well as a majority of adenocarcinomas and basal cell carcinomas.

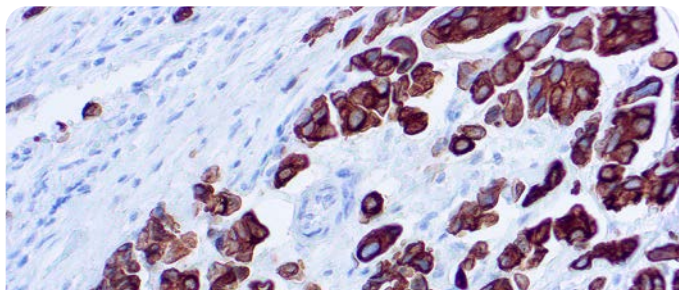


Formalin fixed paraffin embedded human colon carcinoma stained with Cytokeratin 19 antibody.

**Cytokeratin 19**  **IVD**

<b>Catalog No.:</b>	Mob274 Concentrated PDM192 Prediluted
<b>Clone:</b>	A53-B/A2.26
<b>Immunogen:</b>	BALB/C mice were injected with human breast cancer MCF-7 cells.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Skin, Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a 40 kDa protein, cytokeratin 19. Its epitope maps between amino acids 312-335. This antibody reacts with MCF-7 cells, which are known to contain cytokeratin 19.

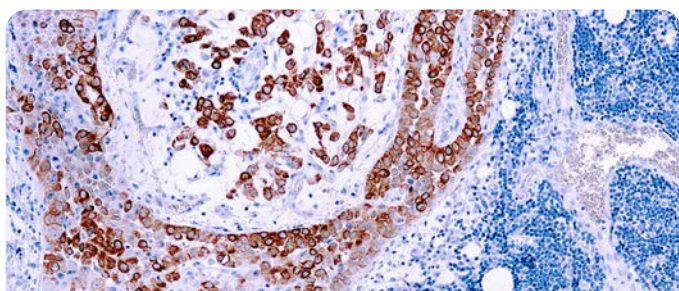


Formalin fixed paraffin embedded human colon carcinoma stained with Cytokeratin 20 antibody.

**Cytokeratin 20**  **IVD**

<b>Catalog No.:</b>	Mob123 Concentrated PDM049 Prediluted
<b>Clone:</b>	KS 20.8
<b>Immunogen:</b>	Cytokeratins isolated from human micro-dissected villi of human duodenal mucosa.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Skin, Colon Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

Cytokeratin 20 is less acidic than the other type I cytokeratins and is of particular interest because of its restricted range of expression. This antibody reacts with cytokeratin polypeptide of 46 kDa in immunoblot analyses. Studies have shown that a marked difference exists in the expression of Cytokeratin 20 among various carcinomas.

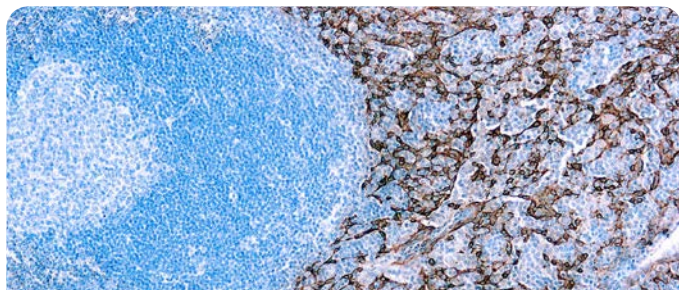


Formalin fixed paraffin embedded human colon stained with Cytokeratin 5.

**Cytokeratin 5**  **IVD**

<b>Catalog No.:</b>	Mob361 Concentrated PDM139 Prediluted
<b>Clone:</b>	XM26
<b>Immunogen:</b>	BALB/C mice were injected with prokaryotic recombinant protein corresponding to 103 amino acid portion of C-terminal region of the human cytokeratin 5 molecule.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

Cytokeratin 5 is a 58 kDa protein and reacts with cytokeratin 5 intermediate filament protein. Cytokeratin 5 and 6 are expressed in basal cell epithelioma, basal cells of prostate, urothelium, vagina, squamous cell carcinomas of skin, tongue, epiglottis and rectal-anal region. Cytokeratin 5 can be useful in the distinction of mesotheliomas from most adenocarcinomas.

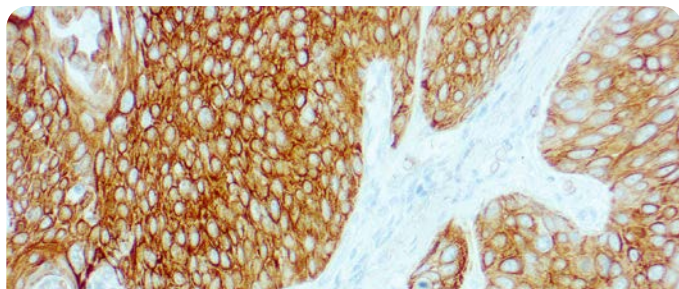


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 5/14.

**Cytokeratin 5/14**  

<b>Catalog No.:</b>	Mob433 Concentrated PDM140 Prediluted
<b>Clone:</b>	XM26 + LL002
<b>Immunogen:</b>	XM26: prokaryotic recombinant protein, 103 amino acid portion of C-terminal region LL002: Synthetic peptide of the extreme C-terminal of human keratin-14.
<b>Isotype:</b>	XM26, IgG1; LL002, IgG3
<b>Positive Control:</b>	Skin, Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody cocktail reacts with cytokeratin 5 intermediate filament protein as well as the 50 kDa cytokeratin 14. Cytokeratin 5 can be useful in the distinction of mesotheliomas from most adenocarcinomas. Cytokeratin 14 can be useful to distinguish stratified epithelial cells from simple epithelial cells.

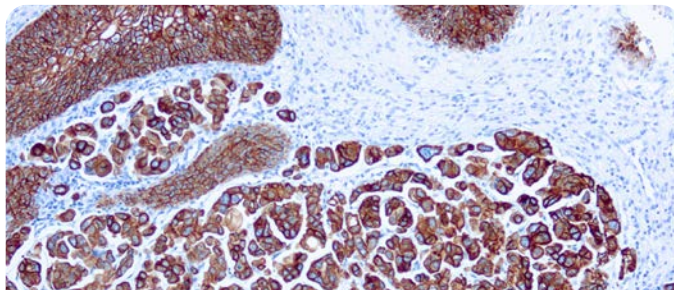


Formalin fixed paraffin embedded lung squamous cell Ca. stained with Cytokeratin 5/6.

**Cytokeratin 5/6**  

<b>Catalog No.:</b>	Mob362 Concentrated PDM123 Prediluted
<b>Clone:</b>	D5/16 B4
<b>Immunogen:</b>	BALB/C mice were injected with cytokeratin 5.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

Cytokeratin 5 (58 kDa) is a high molecular weight, basic type of cytokeratin expressed in basal, intermediate and superficial cell layers of stratified epithelia as well as transitional epithelia, complex epithelia and in mesothelial cells and mesothelioma. Cytokeratin 6 (56 kDa) is also a high molecular weight, basic type cytokeratin expressed by proliferating squamous epithelium often paired with cytokeratin 16.

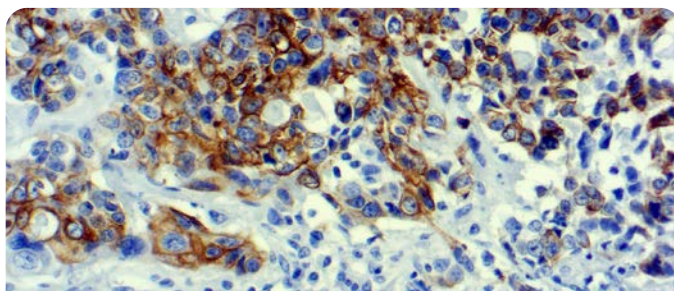


Formalin fixed paraffin embedded human lung adenocarcinoma stained with Cytokeratin 7 antibody.

**Cytokeratin 7**  

<b>Catalog No.:</b>	Mob057 Concentrated PDM097 Prediluted
<b>Clone:</b>	OV-TL 12/30
<b>Immunogen:</b>	BALB/C mice were immunized with ovarian carcinoma cell line, OTN11.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Skin, Lung
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes keratin polypeptide of 54 kDa. It stains a number of epithelial cells including ductal and glandular epithelia. This antibody labels adenocarcinomas and transitional cell carcinomas but does not react with squamous cell carcinomas.

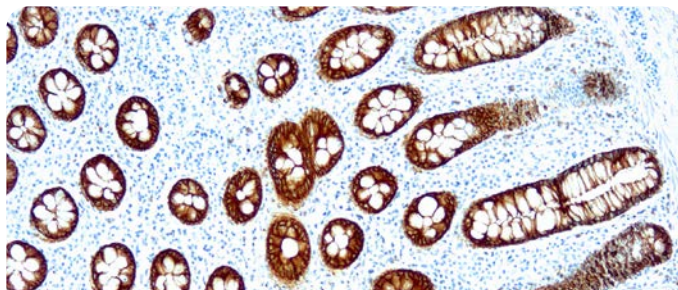


Formalin fixed paraffin embedded breast carcinoma stained with Cytokeratin 7.

**Cytokeratin 7**  

<b>Catalog No.:</b>	Mob563 Concentrated PDM563 Prediluted
<b>Clone:</b>	LP1K
<b>Immunogen:</b>	Sonicated cytoskeleton fractions from SV40 transformed neonatal keratinocytes.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasm

Cytokeratin 7 is expressed in epithelial cells of ovary, lung and breast. It is often used in conjunction with cytokeratin 20 and CDX-2 in distinguishing pulmonary, ovarian and breast carcinomas (CK7+) from most colon carcinomas (CK7-).



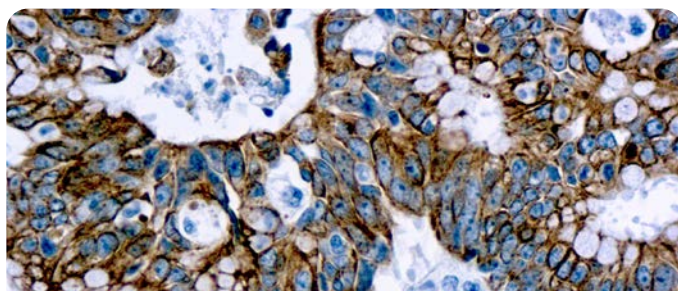
Formalin fixed paraffin embedded human colon stained with Cytokeratin 8 antibody.

### Cytokeratin 8, LMW



<b>Catalog No.:</b>	Mob054 Concentrated PDM117 Prediluted
<b>Clone:</b>	35βH11
<b>Immunogen:</b>	BALB/C mice were immunized with cytoskeletal extract of human hepatocellular carcinoma cell line, Hep3B.
<b>Isotype:</b>	IgM, kappa
<b>Positive Control:</b>	Skin, Colon
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes keratin polypeptide of 54 kDa. It stains strongly with non-squamous epithelium but does not stain squamous epithelium. It reacts with the sweat gland and ducts in the skin. Adenocarcinomas of the ovary, gastrointestinal tract, ductal carcinoma of breast, pancreas and bile ducts, stain positive with this antibody.



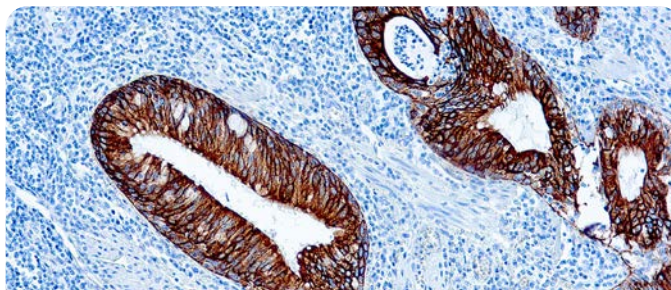
Formalin fixed paraffin embedded human colon adenocarcinoma stained with Cytokeratin 8/18 antibody.

### Cytokeratin 8/18



<b>Catalog No.:</b>	Mob189 Concentrated PDM070 Prediluted
<b>Clone:</b>	5D3
<b>Immunogen:</b>	Cytokeratins from the human breast carcinoma cell line MCF-7.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to human cytokeratins 8 (52.5 kDa) and 18 (45 kDa). This antibody stains simple and glandular epithelium. This antibody can be useful for the identification of adenocarcinomas and most squamous cell carcinomas.



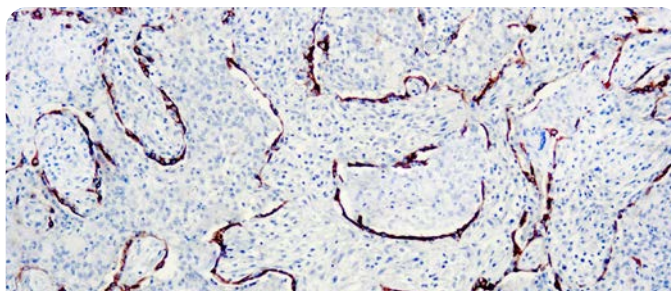
Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE1 antibody.

### Cytokeratin, Acidic (AE1)



<b>Catalog No.:</b>	Mob092 Concentrated PDM043 Prediluted
<b>Clone:</b>	AE1
<b>Immunogen:</b>	BALB/C mice were immunized with human epidermal keratin.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Squamous Lung Carcinoma
<b>Cellular Localization:</b>	Cytoplasm

This antibody recognizes most of the acidic (Type I) keratins. It recognizes keratin polypeptides of 50 and 56.5 kDa. In keratinized epidermis, 50 kDa keratin is present in the basal layer, while 56.5 kDa keratin is present in suprabasal layers. This antibody can be used to stain distinct cell layers in an epithelial tissue and various neoplasms of epithelial origin.



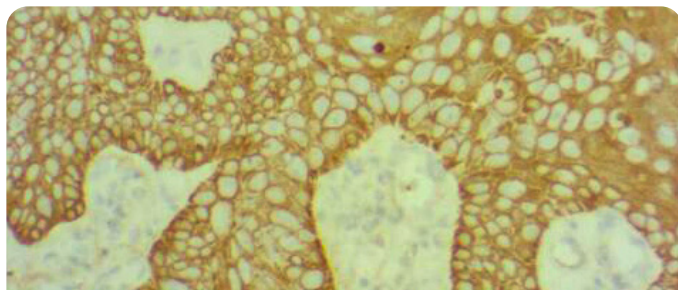
Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE1/AE3.

### Cytokeratin, Pan (AE1/AE3)



<b>Catalog No.:</b>	Mob190 Concentrated PDM072 Prediluted
<b>Clone:</b>	AE1/AE3
<b>Immunogen:</b>	BALB/C mice were immunized with human epidermal keratin.
<b>Isotype:</b>	AE1, IgG1, kappa; AE3, IgG1, kappa
<b>Positive Control:</b>	Squamous lung carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This AE1/AE3 antibody cocktail recognizes most of the acidic (Type I) keratins as well as basic (Type II). It recognizes keratin polypeptides of 40, 48, 50, 52, 54, 56.5, 58, 59 and 64 to 67 kDa. In keratinized epidermis, 50 kDa keratin is present in the basal layer, while 56.5 kDa keratin is present in suprabasal layers. 58 kDa keratin is present in the basal and suprabasal layers, while 65 to 67 kDa keratin is present in the cells above the basal layers. This antibody can be used to stain distinct cell layers in an epithelial tissue and various neoplasms of epithelial origin.



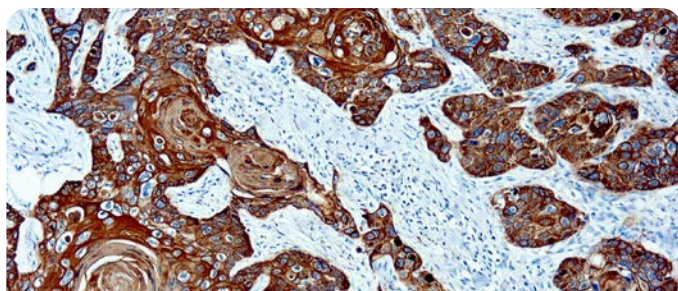
Formalin fixed paraffin embedded human tonsil tissue stained with CKAE1/AE3/8+18 cocktail

**Cytokeratin**



<b>Catalog No.:</b>	Mob601, Mob601-01, Mob601-05 - Concentrated PDM601 Prediluted
<b>Clone:</b>	AE1+AE3+ 5D3
<b>Immunogen:</b>	Human epidermal keratin +Cytoskeleton preparation from human breast cancer MCF-7 cells
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Squamous Lung Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

AE1/AE3 is a broad-spectrum anti pan-keratin antibody cocktail, which differentiates epithelial tumors from non-epithelial tumors e.g., squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer.



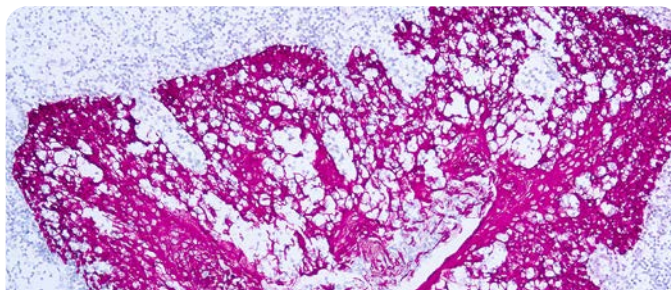
Formalin fixed paraffin embedded human Squamous Lung Carcinoma stained with Cytokeratin antibody.

**Cytokeratin, Basic (AE3)**



<b>Catalog No.:</b>	Mob093 Concentrated PDM044 Prediluted
<b>Clone:</b>	AE3
<b>Immunogen:</b>	BALB/C mice were immunized with human epidermal keratin.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Squamous Lung Carcinoma
<b>Cellular Localization:</b>	Cytoplasm

This antibody recognizes most of the basic (Type II) keratins. It recognizes keratin polypeptides of 58 and 65 to 67 kDa. In keratinized epidermis, 58 kDa keratin is present in the basal and suprabasal layers, while 65 to 67 kDa keratin is present in the cells above the basal layers. This antibody can be used to stain different cell layers in an epithelial tissue and various neoplasms of epithelial origin.



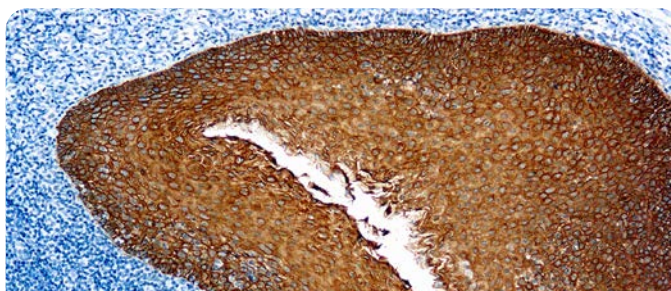
Formalin fixed paraffin embedded human tonsil stained with Cytokeratin HMW antibody.

**Cytokeratin, HMW (34βE12)**



<b>Catalog No.:</b>	Mob059 Concentrated PDM074 Prediluted
<b>Clone:</b>	34βE12
<b>Immunogen:</b>	BALB/C mice were immunized with solubilized keratin extract from human stratum corneum.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Skin, Prostate
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes keratin polypeptides of 68, 58, 56.5 and 50 kDa in the stratum corneum. The antibody reacts with squamous, ductal and other complex epithelia. It stains adenocarcinomas, breast, pancreas, bile duct, salivary gland and transitional cell carcinomas.



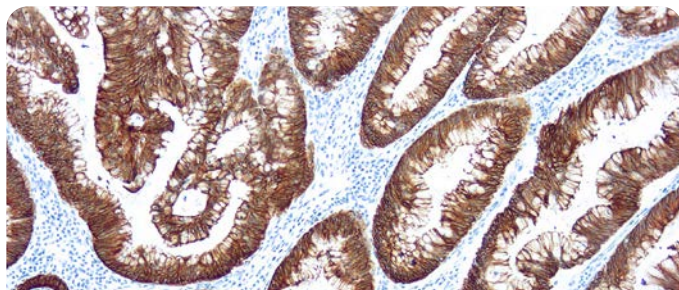
Formalin fixed paraffin embedded human skin stained with Cytokeratin Wide Spectrum antibody.

**Cytokeratin, Wide Spectrum**



<b>Catalog No.:</b>	RP010 Concentrated PDR035 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Cytokeratin isolated from bovine muzzle epidermis.
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with cytokeratins of 58, 56, 52, 60, 51, 48 and 68 kDa MW. This antibody is well suited for the staining of a broad spectrum of human keratins.



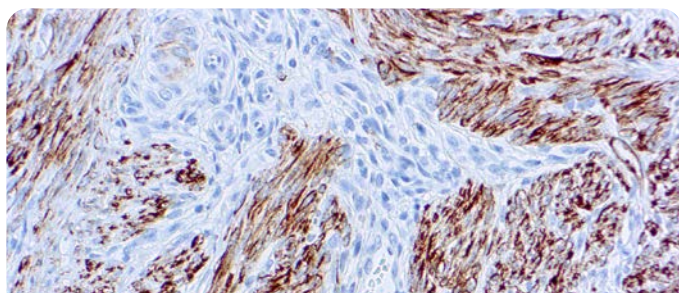
Formalin fixed paraffin embedded human colon adenocarcinoma stained with Cytokeratin, Pan antibody.

**Cytokeratin, Pan**



<b>Catalog No.:</b>	RP167 Concentrated PDR167 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Recombinant Full-length human KRT76 and KRT77 proteins.
<b>Positive Control:</b>	Colon adenocarcinoma
<b>Cellular Localization:</b>	Cytoplasmic

Many studies have shown the usefulness of keratins as markers in cancer research and tumor diagnosis. It is a broad spectrum anti pan-cytokeratin antibody, which differentiates epithelial tumors from non-epithelial tumors e.g. squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer. This antibody stains cytokeatins present in normal and abnormal human tissues and has high sensitivity in the recognition of epithelial cells and carcinomas.



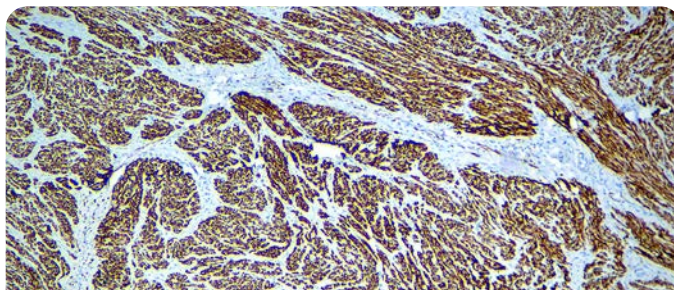
Formalin fixed paraffin embedded human uterus stained with Desmin antibody.

**Desmin**



<b>Catalog No.:</b>	Mob060 Concentrated PDM006 Prediluted
<b>Clone:</b>	D33
<b>Immunogen:</b>	BALB/C mice were immunized with purified desmin from human muscle.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Leiomyoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with desmin protein of 53 kDa. Both striated as well as smooth muscle cells stain well with this antibody.



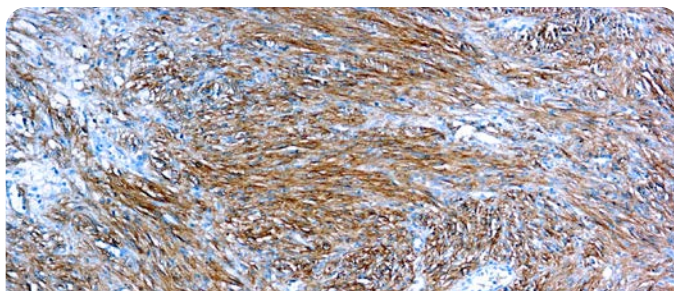
Formalin fixed paraffin embedded human Leiomyoma stained with Desmin (DE R 11)

**Desmin (DE-R-11)**



<b>Catalog No.:</b>	Mob610 Concentrated PDM610 Prediluted, PDM610-HL
<b>Clone:</b>	DE-R-11
<b>Immunogen:</b>	BALB/C mice were immunized with purified desmin from human muscle.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Leiomyoma
<b>Cellular Localization:</b>	Cytoplasmic

Desmin, a 469 amino acid protein found near the Z line in sarcomeres, is expressed more frequently in adult differentiated state tissues. Anti-desmin detects cells of normal smooth, skeletal, and cardiac muscles. Antibody reacts with leiomyomas, leiomyosarcoma, rhabdomyomas, rhabdomyosarcoma, and perivascular cells of glomus tumors of the skin.



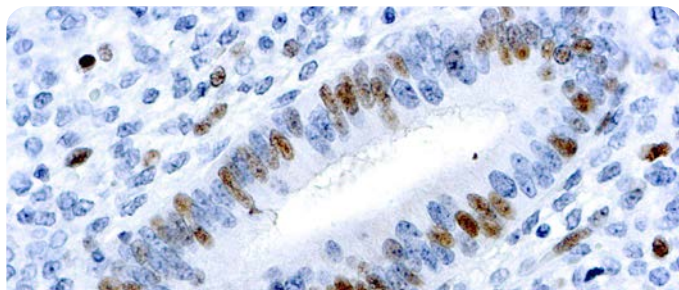
Formalin fixed paraffin embedded gastrointestinal stromal tumor stained with DOG1 antibody.

**DOG 1**



<b>Catalog No.:</b>	Mob466 Concentrated PDM170 Prediluted
<b>Clone:</b>	DOG1.1
<b>Immunogen:</b>	A synthetic peptide of human DOG1 protein.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Gastrointestinal stromal tumor tissue
<b>Cellular Localization:</b>	Cytoplasmic and membrane

DOG1 is expressed ubiquitously in gastrointestinal stromal tumors irrespective of c-Kit or PDGFR alpha mutation status. Reactivity for DOG1 may aid in the diagnosis of gastrointestinal stromal tumors, including PDGFRA mutants that fail to express c-Kit antigen, and lead to appropriate treatment with imatinib mesylate, an inhibitor of the c-Kit tyrosine kinase.

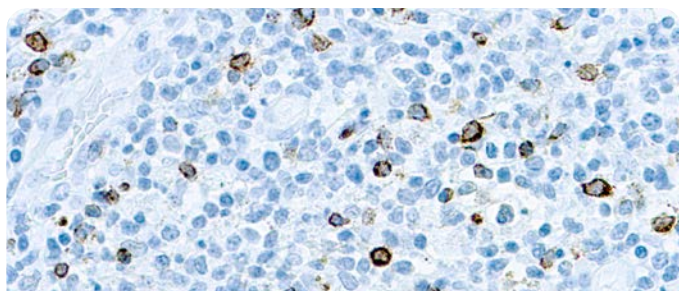


Formalin fixed paraffin embedded human uterus stained with E2F-1 Transcription Factor antibody.

**E2F-1 Transcription Factor**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob381, Mob381R - Concentrated
<b>Clone:</b>	KH95
<b>Immunogen:</b>	BALB/C mice were immunized with a recombinant human E2F-1 protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Tonsil, breast carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a protein of 60 kDa. E2Fs are DNA-binding proteins, which associate with negative regulators, such as the retinoblastoma p107 protein, resulting in an altered rate of gene transcription. E2F-1 is proposed to be involved in several cellular processes that range from tumor suppression, cell progression and oncogenesis. E2F-1 over expression can also drive cells into apoptosis.

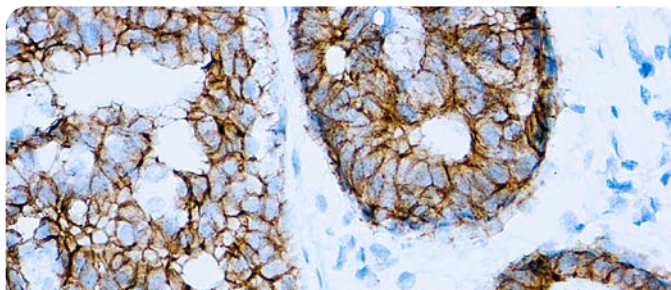


Formalin fixed paraffin embedded human infected tissue stained with EBV.

**Epstein-Barr Virus (EBV)**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob194, Mob194R - Concentrated PDM128, PDM128R - Prediluted
<b>Clone:</b>	CS1, CS2, CS3, CS4
<b>Immunogen:</b>	Recombinant fusion protein containing sequences of bacterial $\beta$ -galactosidase and EBV encoded latent membrane protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Infected lymphoblastoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 60 kDa latent membrane protein (LMP-1) encoded by the BNLF1 gene of the EBV. Each clone reacts with different epitopes on the hydrophilic C-terminus of the cytoplasmic domain of LMP-1. This antibody stains strongly with EBV positive lymphoblastoid cell lines and EBV infected B cell immunoblasts in infectious mononucleosis.

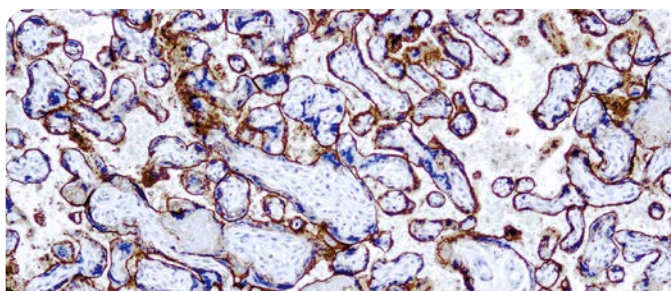


Formalin fixed paraffin embedded human breast carcinoma stained with E-Cadherin antibody.

**E-Cadherin**  **IVD**

<b>Catalog No.:</b>	Mob550 Concentrated PDM182 Prediluted
<b>Clone:</b>	SPM471
<b>Immunogen:</b>	Recombinant protein encoding human Cadherin-E 600-707aa
<b>Isotype:</b>	IgG 2b/k
<b>Positive Control:</b>	Breast carcinoma, Colon carcinoma, Appendix Cellular Localization: Cell Membrane
<b>Cellular Localization:</b>	Cell Membrane

E-cadherin (uvomorulin, cell-CAM120/80) is a calcium dependent cell adhesion molecule expressed predominately in epithelial tissues. It plays an important role in the growth and development of cells via the mechanisms of control of tissue architecture and the maintenance of tissue integrity.

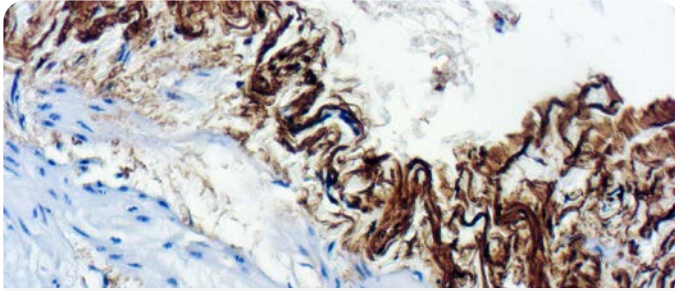


Formalin fixed paraffin embedded human placenta stained with EGFR antibody.

**EGFR (Epidermal Growth Factor Receptor)**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob461, Mob461R - Concentrated PDM226, PDM226R - Prediluted
<b>Clone:</b>	31G7
<b>Immunogen:</b>	Human EGFR derived from A-431 cell line.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma, Placenta
<b>Cellular Localization:</b>	Membrane, cytoplasm

The epidermal growth factor receptor (EGFR) is a 170 kDa transmembrane protein consisting of an extracellular EGF-binding domain, a short transmembrane region and an intracellular domain with ligand-activated tyrosine kinase activity. EGFR is expressed in many normal epithelial tissues, particularly in the basal layers of stratified epithelium and in squamous epithelium. Over expression of EGFR has been observed in many types of neoplasia, as a result of gene amplification and/or increased protein transcription.



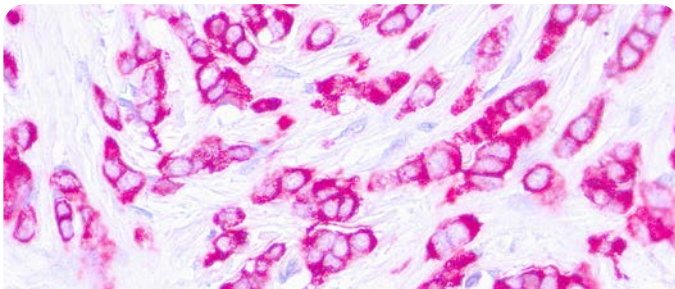
Formalin fixed paraffin embedded human renal cell carcinoma stained with Elastin antibody.

### Elastin



<b>Catalog No.:</b>	Mob230 Concentrated PDM300 Prediluted
<b>Clone:</b>	BA4
<b>Immunogen:</b>	Bovine $\alpha$ -elastin.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Heart, Kidney
<b>Cellular Localization:</b>	Connective tissue

This antibody recognizes insoluble elastin,  $\alpha$ -elastin, soluble non-cross linked precursor of elastin (tropoelastin). Elastin is an important polymeric protein of connective tissue that imparts elasticity to vertebrate elastic tissues.



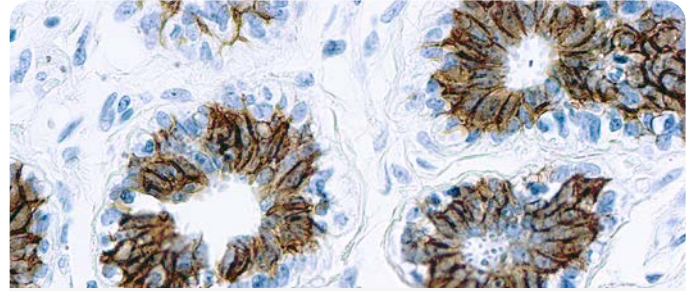
Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen.

### Epithelial Membrane Antigen (EMA)



<b>Catalog No.:</b>	Mob401 Concentrated PDM204 Prediluted
<b>Clone:</b>	E29
<b>Immunogen:</b>	BALB/C mice were immunized with delipidated human milk fat globule membrane preparation.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cell membrane and cytoplasmic

This antibody reacts with an antigen of 265-400 kDa belonging to a heterogeneous group of heavily glycosylated proteins called human milk fat globule proteins. It stains both normal and neoplastic cells. Among normal epithelia, it reacts strongly with mammary epithelium and glandular epithelia but shows a patchy staining with squamous epithelium.



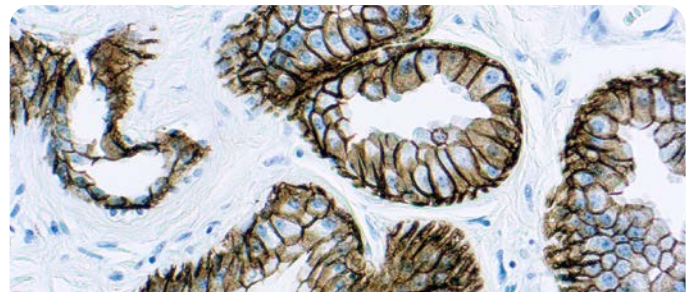
Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen.

### Epithelial Antigen



<b>Catalog No.:</b>	Mob406 Concentrated PDM131 Prediluted
<b>Clone:</b>	Ber-EP4
<b>Immunogen:</b>	BALB/C mice were immunized with human breast carcinoma cell line, MCF-7.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Kidney, Breast carcinoma
<b>Cellular Localization:</b>	Cell membrane

Epithelial antigen is a cell surface glycoprotein and is broadly distributed in epithelial cells and displays a highly conserved expression in carcinomas. Epithelial antigen has been shown to play an important role as a tumor cell marker in lymph nodes from patients with esophageal carcinoma. Epithelial antigen can be used to distinguish between basal cell and basosquamous carcinomas and squamous cell carcinoma of the skin.



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen.

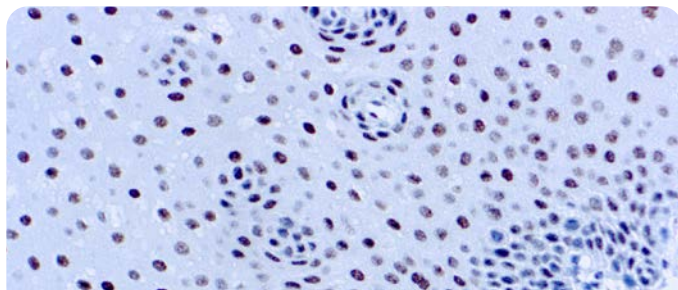
### Epithelial Antigen



<b>Catalog No.:</b>	Mob062 Concentrated PDM077 Prediluted
<b>Clone:</b>	VU-1D9
<b>Immunogen:</b>	ALB/C mice were immunized with small cell lung carcinoma.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with two glycoproteins of 34 and 49 kDa present on the epithelial cells. It stains with simple epithelia and basal layers of stratified non-keratinized squamous epithelium.





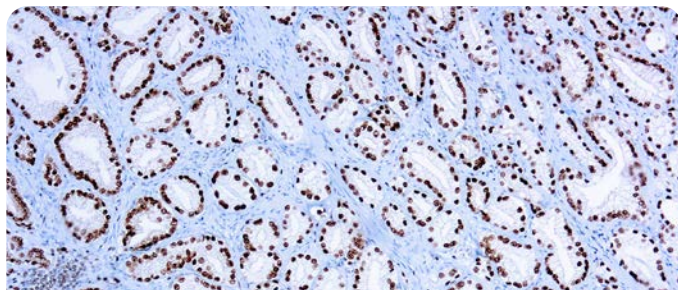
Formalin fixed paraffin embedded human tonsil stained with ERCC1 antibody.

**ERCC1**



<b>Catalog No.:</b>	Mob336 Concentrated PDM151 Prediluted
<b>Clone:</b>	8F1
<b>Immunogen:</b>	BALB/C mice were injected with full length recombinant human ERCC1 protein.
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a 33-36 kDa protein known as ERCC1 (excision repair cross complementing) polypeptide. ERCC1 is required for nucleotide excision repair of damaged DNA and is homologous to RAD10. In mammalian cells, XPG cleaves 3' of the DNA lesion while ERCC1-XPF complex makes the 5' incision.



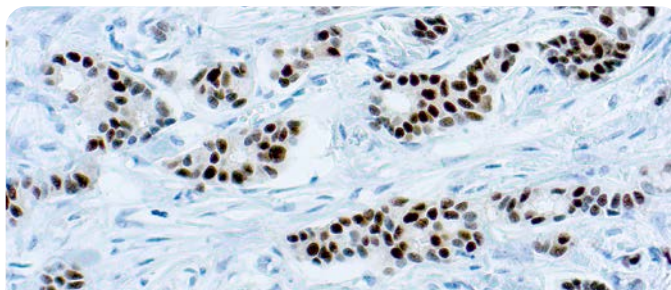
Formalin fixed paraffin embedded human prostate carcinoma stained with ERG antibody.

**ERG**



<b>Catalog No.:</b>	RMPD034 Prediluted
<b>Clone:</b>	EP111
<b>Immunogen:</b>	A synthetic peptide corresponding to residues on the C-terminus of the human ERG protein.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Prostate carcinoma
<b>Cellular Localization:</b>	Nuclear

ERG, the ETS related gene, belongs to the ETS family that plays important roles in cell development, differentiation, proliferation, apoptosis and tissue remodeling. The ERG antibody identifies endothelial cells, lymphocytes and prostate cancer cells.



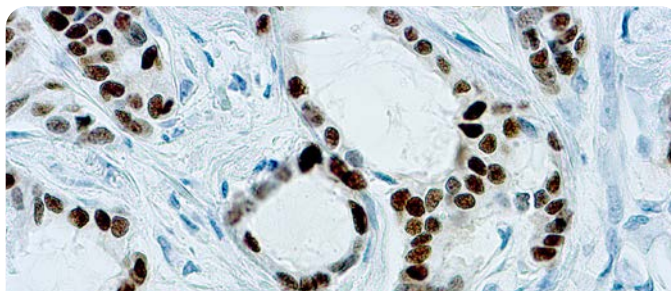
Formalin fixed paraffin embedded human breast carcinoma stained with Estrogen Receptor antibody.

**Estrogen Receptor (ER)**



<b>Catalog No.:</b>	Mob121, Mob121R - Concentrated PDM048, PDM048R - Prediluted
<b>Clone:</b>	6F11
<b>Immunogen:</b>	Prokaryotic recombinant protein corresponding to the full-length estrogen receptor molecule.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to estrogen receptor, which is associated with superior prognosis and a better response to anti-estrogen therapy. The nuclei of the estrogen receptor positive cells stain very strongly with this antibody, without any staining in the cytoplasm.



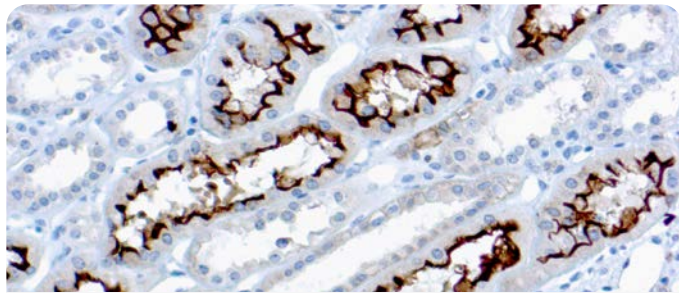
Formalin fixed paraffin embedded human breast carcinoma stained with Estrogen Receptor antibody.

**Estrogen Receptor (ER)**



<b>Catalog No.:</b>	RMAB001, RMAB001R - Concentrated RMPD001, RMPD001R - Prediluted
<b>Clone:</b>	SP1
<b>Immunogen:</b>	Synthetic peptide derived from C-terminal of human estrogen receptor.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Breast Carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody recognizes a protein of 67kDa, which is identified as estrogen receptor (ER). ER content of breast cancer tissue is an important parameter in the prediction of prognosis and response to endocrine therapy. This antibody strongly stains the nucleus of epithelial cells in breast carcinomas. The ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy.

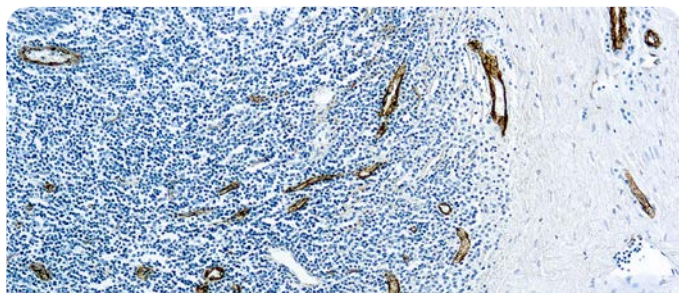


Formalin fixed paraffin embedded renal cell carcinoma stained with Ezrin antibody.

**Ezrin/p81/Cytovillin**  **IVD**

<b>Catalog No.:</b>	Mob380 Concentrated
<b>Clone:</b>	3C12
<b>Immunogen:</b>	BALB/C mice were immunized with a recombinant fragment of human ezrin corresponding to amino acid 362-585.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Lung
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with a protein of 81 kDa. Ezrin serves as a tyrosine kinase substrate and is phosphorylated in EGF-stimulated cells. Ezrin is a cytoplasmic protein, enriched in microvilli and other cell surfaces. Ezrin has an actin-binding capacity. Ezrin is expressed in epithelial cells but not in mesenchymal cells. Ezrin is also expressed by certain epithelial tumors, such as renal cell adenocarcinomas.

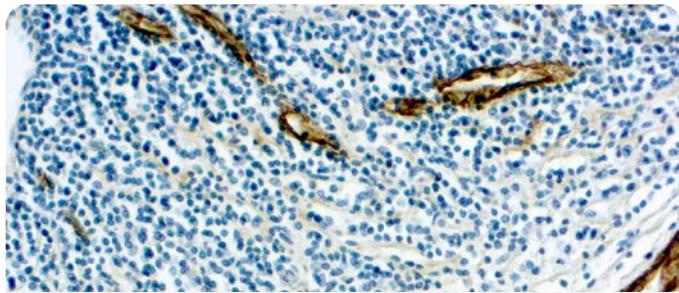


Formalin fixed paraffin embedded human tonsil stained with Factor VIII antibody.

**Factor VIII (Von Willebrand Factor)**  **IVD**

<b>Catalog No.:</b>	Mob196 Concentrated PDM019 Prediluted
<b>Clone:</b>	F8/86
<b>Immunogen:</b>	Von Willebrand factor isolated from human plasma.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with Von Willebrand factor in endothelial cells. It also reacts with megakaryocytes in human bone marrow.

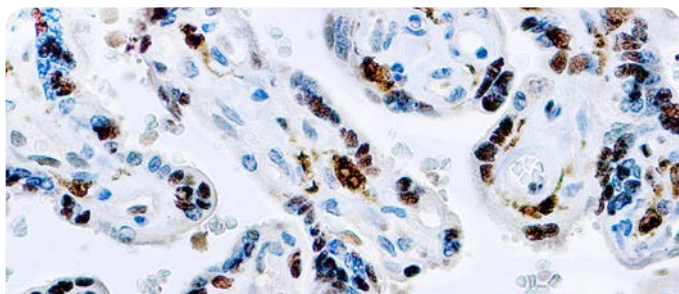


Formalin fixed paraffin embedded human tonsil stained with Factor VIII antibody.

**Factor VIII (Von Willebrand Factor)**  **IVD**

<b>Catalog No.:</b>	RP012 Concentrated PDR014 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Factor VIII related antigen isolated from human plasma
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with human factor VIII related antigen. It stains endothelial cells and megakaryocytes in various human tissues. This antibody does not cross-react with any other cell types.

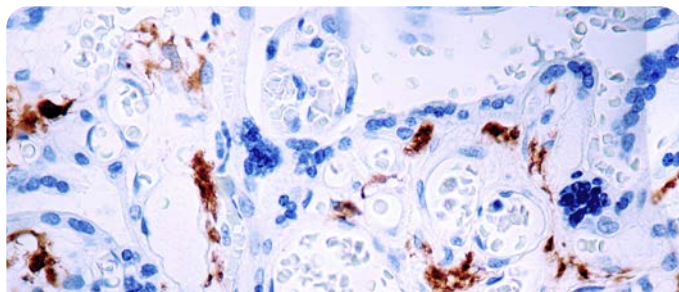


Formalin fixed paraffin embedded human placenta stained with Factor XIII-A antibody.

**Factor XIII-A**  **IVD**

<b>Catalog No.:</b>	RP103 Concentrated PDR054 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Recombinant protein corresponding to A-subunit of coagulation Factor XIII a.
<b>Positive Control:</b>	Placenta
<b>Cellular Localization:</b>	Cytoplasmic, nuclear

This antibody reacts with a 160 kDa (unreacted dimer) and 80 kDa (reduced monomer) protein. Factor XIII is a  $\beta$ -globulin found in plasma and is composed of two subunits, Factor XIII-A and Factor XIII-B. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160 kDa. Factor XIII is a dermal dendrocyte marker and shows variable reaction with these types of tumors. Factor XIII can be used for histiocytic phenotyping and has been reported to mark capillary hemangiomas and tumors of the central nervous system.

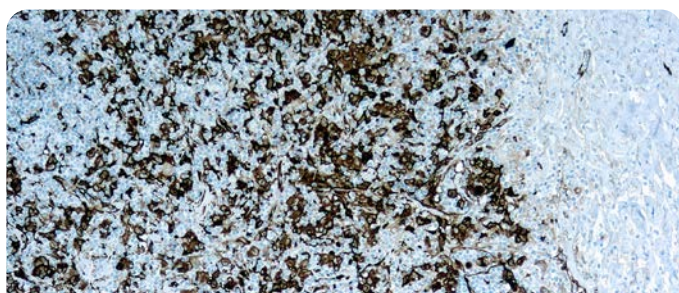


Formalin fixed paraffin embedded human placenta stained with Factor XIII-A antibody.

**Factor XIII-A**  

<b>Catalog No.:</b>	Mob321 Concentrated PDM141 Prediluted
<b>Clone:</b>	AC-1A1
<b>Immunogen:</b>	BALB/C mice were injected with recombinant human protein corresponding to A-subunit of coagulation Factor XIII.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Placenta
<b>Cellular Localization:</b>	Cytoplasmic, nuclear

This antibody is specific to 160 kDa protein known as Factor XIII-A. Factor XIII is a  $\beta$ -globulin found in plasma and is composed of two subunits, Factor XIII-A and Factor XIII-B. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160 kDa. Factor XIII is a dermal dendrocyte marker and v variable reaction with these types of tumors.

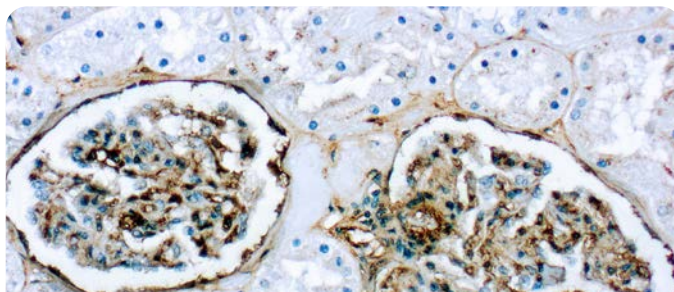


Formalin fixed paraffin embedded human Hodgkin's lymphoma stained with Fascin-1 antibody.

**Fascin-1**  

<b>Catalog No.:</b>	Mob560 Concentrated PDM560 Prediluted
<b>Clone:</b>	55k-2
<b>Immunogen:</b>	Human fascin-1
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Hodgkin's lymphoma, ovary
<b>Cellular Localization:</b>	Cytoplasmic

This marker may be helpful to distinguish between Hodgkin lymphoma and non-Hodgkin lymphoma in difficult cases. Antibody to fascin-1 has been suggested as a prognostic marker in neuroendocrine neoplasms of the lung as well as in ovarian cancer. Fascin-1 expression may be induced by Epstein-Barr virus (EBV) infection of B cells with the possibility that viral induction of fascin in lymphoid or other cell types must also be considered in EBV-positive cases.

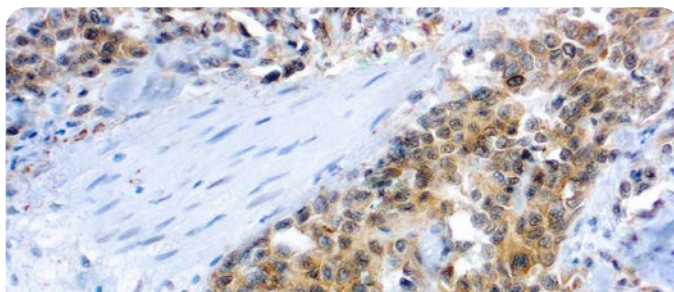


Formalin fixed paraffin embedded human kidney stained with Fibronectin antibody.

**Fibronectin**  

<b>Catalog No.:</b>	RP013 Concentrated PDR170 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Fibronectin isolated from a pool of normal human plasma.
<b>Positive Control:</b>	Kidney
<b>Cellular Localization:</b>	Basement membrane, connective tissue

This antibody reacts with human fibronectin in liver, tonsil, skin and kidney. Traces of contaminating antibodies have been removed by solid-phase adsorption. Only the fibronectin arch was observed in crossed immunoelectrophoresis.

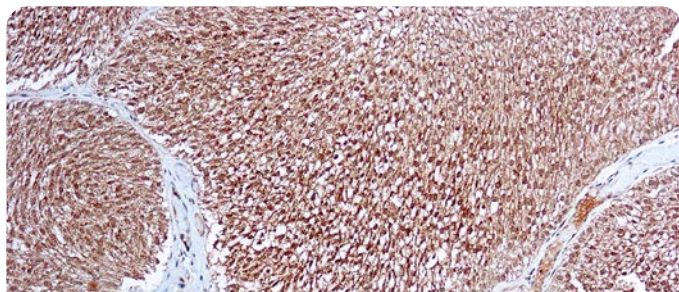


Formalin fixed paraffin embedded human skin stained with Flk-1 antibody.

**Flk-1/KDR/VEGFR2**  

<b>Catalog No.:</b>	RP076 Concentrated PDR171 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide derived from the C-terminus of the precursor form of the mouse Flk-1.
<b>Positive Control:</b>	Angiosarcoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with a 180 kDa protein, known as Flk-1, KDR or vascular endothelial growth factor receptor 2 (VEGFR2). Flk-1 is a cell membrane receptor kinase. Flk-1 is a high affinity receptor for vascular endothelial growth factor and is putatively involved in the growth of endothelial cells and angiogenesis.

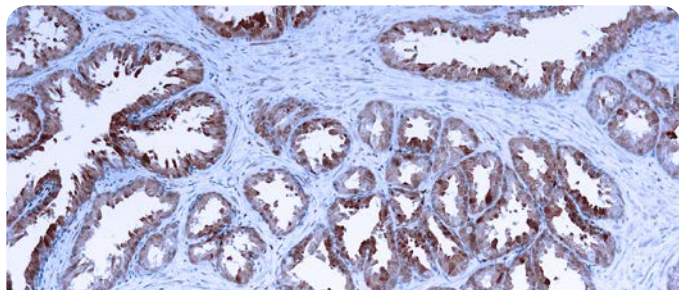


Formalin fixed paraffin embedded human bladder carcinoma stained with Flt-1 antibody.

**Flt-1/VEGFR1**  

<b>Catalog No.:</b>	RP077 Concentrated
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide derived from the C-terminus of the Flt-1 precursor of human origin.
<b>Positive Control:</b>	Angiosarcoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with a 180 kDa protein, known as Flt-1 or vascular endothelial growth factor receptor 1 (VEGFR1). Flt-1 is a cell membrane receptor kinase. Flk-1 has a high affinity receptor for vascular endothelial growth factor and is putatively involved in the growth of endothelial cells and angiogenesis.

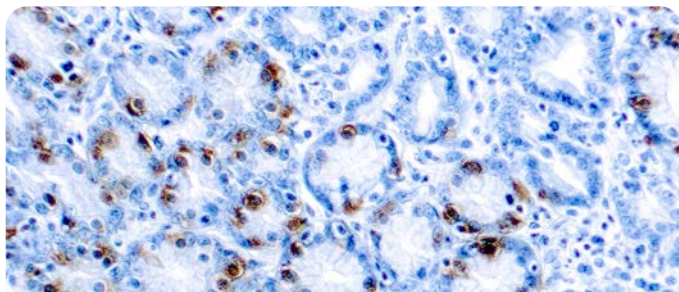


Formalin fixed paraffin embedded human prostate carcinoma stained with Galectin-3.

**Galectin-3**  

<b>Catalog No.:</b>	Mob541 Concentrated PDM541 Prediluted
<b>Clone:</b>	H-5
<b>Immunogen:</b>	Raised against a synthetic sequence of amino acids 2-31 of human origin
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Colon carcinoma, papillary thyroid carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Nuclear

Galectin-3 is expressed in colonic and intestinal epithelium, inflammatory macrophages, papillary and follicular carcinomas, neoplastic astrocytes and some B and T lymphocytes. Upregulated expression of galectin-3 is involved in cancer progression and metastasis. Galectin-3 mediates the endocytosis of  $\beta$ 1 Integrins in a lactose-dependent manner and is associated with thyroid malignancy and Crohn's disease. It may also be used as a marker for diagnosing cases involving Hurthle cell adenomas and carcinomas.

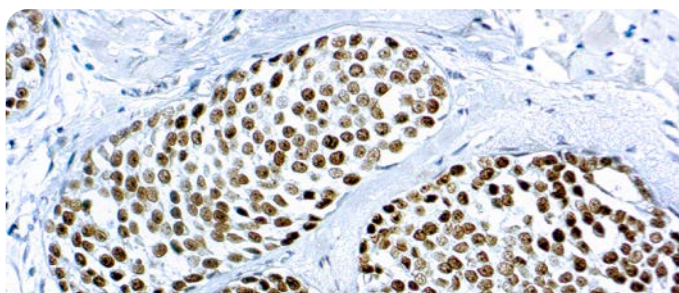


Formalin fixed paraffin embedded stomach stained with Gastrin antibody.

**Gastrin**  

<b>Catalog No.:</b>	RP044 Concentrated PDR027 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Recombinant gastrin conjugated to KLH.
<b>Positive Control:</b>	Stomach
<b>Cellular Localization:</b>	Cytoplasmic

The antibody is specific against gastrin-containing cells. This anti-body reacts with human gastrin I and human gastrin I fragments. No cross-reactivity was observed with rat gastrin, human big gastrin, human gastrin releasing peptide, sulfated cholecystokinin amide, non-sulfated cholecystokinin amide and cholecystokinin.

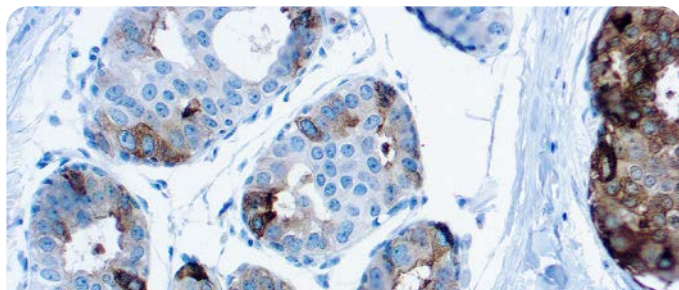


Formalin fixed paraffin embedded breast carcinoma stained with GATA-3.

**GATA-3**  

<b>Catalog No.:</b>	Mob564 Concentrated PDM564 Prediluted
<b>Clone:</b>	L50-823
<b>Immunogen:</b>	Peptide between trans-activation and DNA-binding domains of GATA-3.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma, urothelial carcinomas
<b>Cellular Localization:</b>	Nuclear

GATA3 expression is primarily seen in breast carcinoma and urothelial carcinoma. Anti-GATA3 can also be useful in the identification of unknown primary carcinoma when carcinomas of the breast or bladder are a possibility.

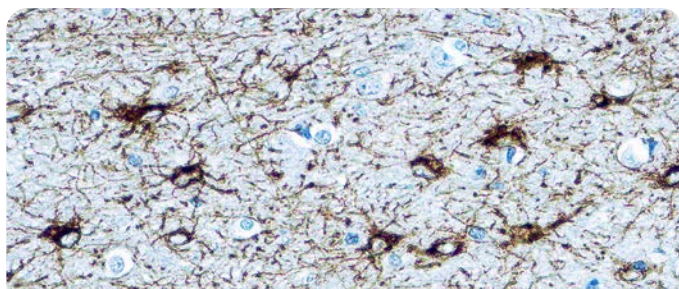


Formalin fixed paraffin embedded human breast carcinoma stained with GCDFP-15.

**GCDFP-15**  
(Gross Cystic Disease Fluid Protein-15)  

<b>Catalog No.:</b>	Mob526 Concentrated PDM261 Prediluted
<b>Clone:</b>	DBM15.52
<b>Immunogen:</b>	Recombinant human GCDFP-15 protein fragment (aa 41-146).
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic (Golgi bodies) and Secreted

It recognizes a protein of 15kDa, identified as Gross cystic disease fluid protein 15 (GCDFP-15). It is a major protein component of benign breast gross cysts. It is a known marker of breast cancer, as it is found in approximately 50% of all breast cancer specimens. GCDFP-15, also known as PIP, for prolactin inducible protein, is a prolactin and androgen controlled protein. This antibody is useful in the identification of metastatic breast carcinoma, or fluid analysis.

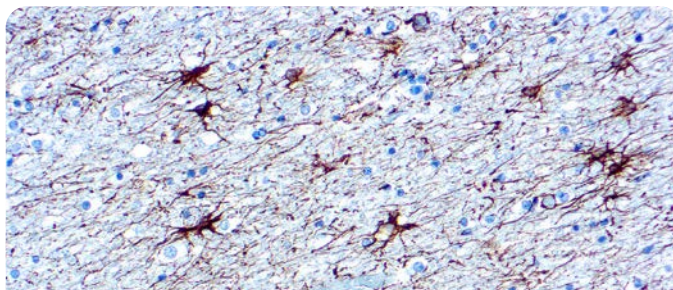


Formalin fixed paraffin embedded human brain stained with GFAP antibody.

**GFAP (Glial Fibrillary Acidic Protein)**  

<b>Catalog No.:</b>	RP014 Concentrated PDR028 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Glial fibrillary protein isolated from cow spinal cord.
<b>Positive Control:</b>	Brain
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with human GFAP. In the central nervous system, this antibody stains astrocytes and some groups of ependymal cells. However, in the peripheral nervous system, it stains Schwann cells, satellite cells and enteric glial cells.

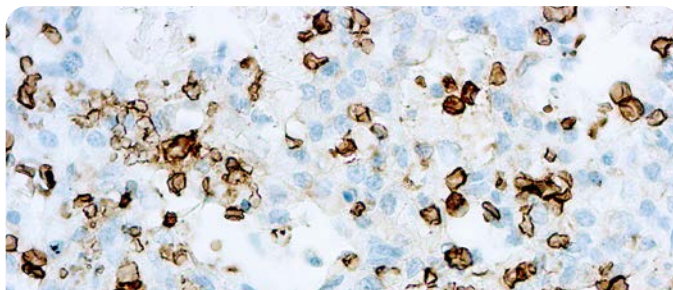


Formalin fixed paraffin embedded human brain stained with GFAP antibody.

**GFAP (Glial Fibrillary Acidic Protein)**  

<b>Catalog No.:</b>	Mob064 Concentrated PDM008 Prediluted
<b>Clone:</b>	GA5
<b>Immunogen:</b>	BALB/C mice were immunized with glial fibrillary protein from porcine spinal cord.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Brain
<b>Cellular Localization:</b>	Cytoplasm

This antibody reacts with the 52 kDa intermediate filament protein GFAP in brain and spinal cord. It labels some astrocytes and some CNS ependymal cells but not oligodendrocytes or neurons. This antibody does not react with other intermediate filament proteins.

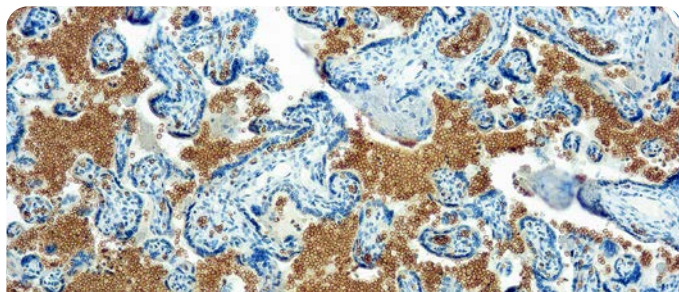


Formalin fixed paraffin embedded human bladder stained with GLUT-1 antibody.

**GLUT-1**   

<b>Catalog No.:</b>	RP128, RP128R - Concentrated
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide derived from C-terminal of human GLUT-1.
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with a 55 kDa protein. Glucose is fundamental to the metabolism of mammalian cells. Several glucose transporter protein (Glut) isoforms have been identified and shown to function in response in insulin and IGF-1 induced signaling. GLUT-1 is detectable in many human tissues including those of the colon, lung, stomach, esophagus and breast. GLUT-1 immunoreactivity in some cancers, including trans-carcinoma of the urinary bladder, has been associated with aggressive behavior.



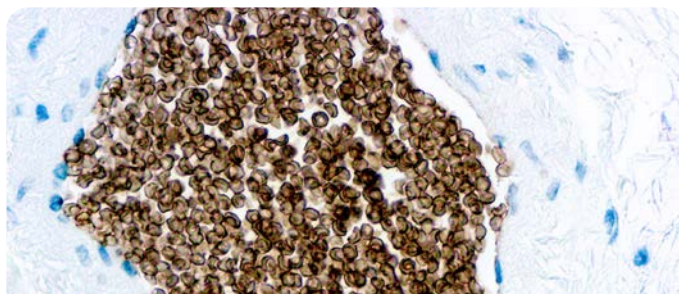
Formalin fixed paraffin embedded human placenta stained with Glycophorin A antibody.

### Glycophorin A



<b>Catalog No.:</b>	Mob066 Concentrated PDM124 Prediluted
<b>Clone:</b>	JC159
<b>Immunogen:</b>	BALB/C mice were immunized with formalin fixed membrane from a hairy cell leukemia.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to erythroid cells at various stages of differentiation from the erythroblast to the mature red cell.



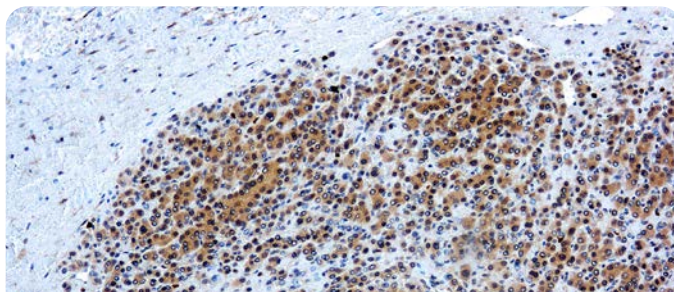
Formalin fixed paraffin embedded human tonsil stained with Glycophorin C antibody.

### Glycophorin C



<b>Catalog No.:</b>	Mob067 Concentrated PDM578 Prediluted
<b>Clone:</b>	Ret40f
<b>Immunogen:</b>	BALB/C mice were injected with red cell ghosts.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody is specific to  $\beta$  sialoglycophorin also known as glycophorin C. Glycophorin C is found on the human erythrocyte membrane and is one of four sialic acid-rich polypeptides.



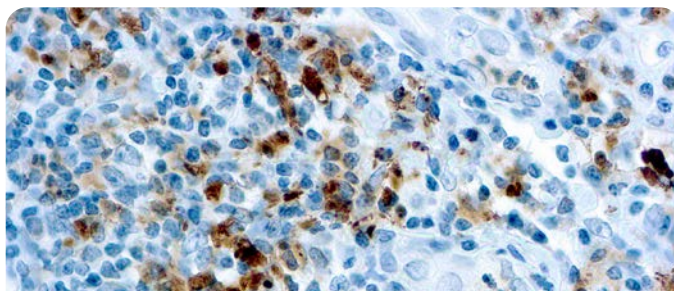
Formalin fixed paraffin embedded human hepatocellular carcinoma stained with Glypican-3.

### Glypican-3



<b>Catalog No.:</b>	Mob561 Concentrated PDM561 Prediluted
<b>Clone:</b>	YP7
<b>Immunogen:</b>	Human Glypican-3
<b>Isotype:</b>	IgG1, Kappa
<b>Positive Control:</b>	Thyroid carcinoma, hepatocellular carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

Glypican-3 (GPC3) is a glycosylphosphatidyl inositol-anchored membrane protein, which may also be found in a secreted form. Anti-GPC3 has been identified as a useful tumor marker for the diagnosis of hepatocellular carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilms' tumor. In contrast, GPC3 is not expressed in anaplastic carcinoma.



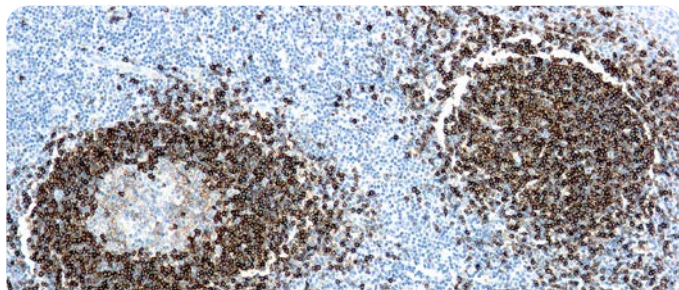
Formalin fixed paraffin embedded human Hodgkin's lymphoma stained with Granzyme B antibody.

### Granzyme B



<b>Catalog No.:</b>	RP105 Concentrated PDR050 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide from the N-terminus of human granzyme B.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with a 32 kDa protein. Granzymes are neutral serine proteases, which are stored in specialized lytic granules of cytotoxic T lymphocytes (CTL) and in natural killer (NK) cells. A number of granzymes (A to G) have been isolated and cloned. Human granzyme B is involved in target cell apoptosis during lymphocyte-mediated cytotoxicity. This antibody is useful in the localization of granzyme B containing lytic granules and for the characterization of activated CTL or NK cells.

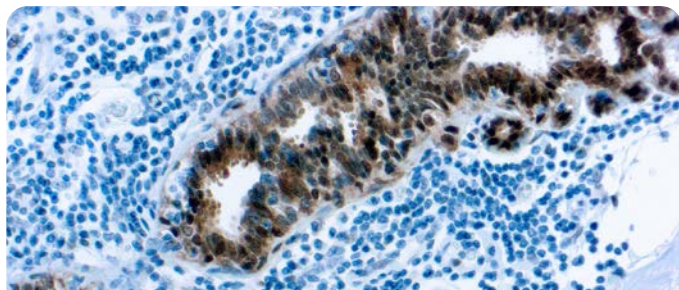


Formalin fixed paraffin embedded human tonsil stained with Hairy Cell Leukemia antibody.

**Hairy Cell Leukemia**  

<b>Catalog No.:</b>	Mob200 Concentrated PDM024 Prediluted
<b>Clone:</b>	DBA.44
<b>Immunogen:</b>	DEAU cell line established from a large cell lymphoma.
<b>Isotype:</b>	IgM, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane, cytoplasmic

This antibody reacts with a subset of B-lymphocytes localized in the follicular mantle zone. It reacts with 97% of hairy cell leukemia cases. This antibody shows strong positive staining of about 35% of cases of high grade B cell lymphomas.

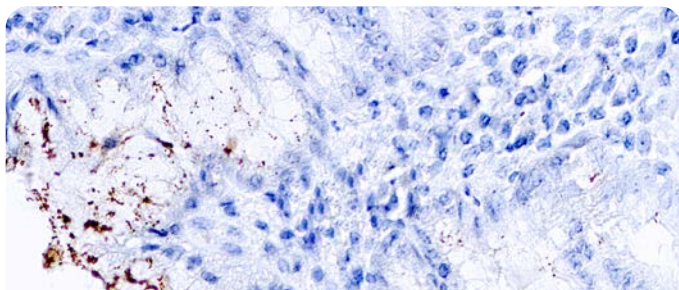


Formalin fixed paraffin embedded human breast carcinoma stained with Heat Shock Protein 70 antibody.

**Heat Shock Protein 70 (HSP 70)**  

<b>Catalog No.:</b>	Mob269 Concentrated PDM597 Prediluted
<b>Clone:</b>	W27
<b>Immunogen:</b>	BALB/C mice were injected with purified HSP70 protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and nuclear

This antibody is specific to constitutive (HSP73) and inducible (HSP72) form of HSP70. HSP70 is found to be associated with steroid receptors, actin, p53, polyoma T antigen, nucleotides and other known proteins. HSP70 has been shown to be involved in protective roles against thermal stress, cytotoxic drugs and other damaging conditions.

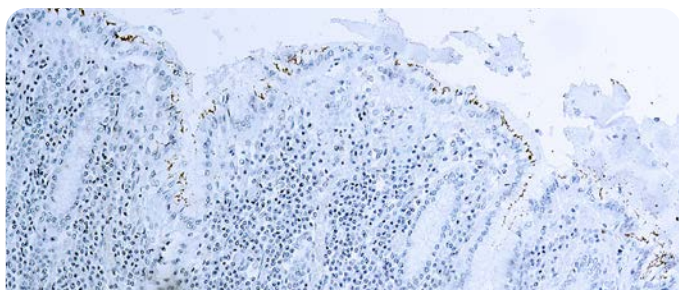


Formalin fixed paraffin embedded human stomach infected with H.pylori and stained with H.pylori antibody.

**H. pylori**  

<b>Catalog No.:</b>	Mob559 Concentrated PDM559 Prediluted
<b>Clone:</b>	DBM15.75
<b>Immunogen:</b>	Helicobacter pylori
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Infected stomach
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with the 54 kDa (flagellin) of H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

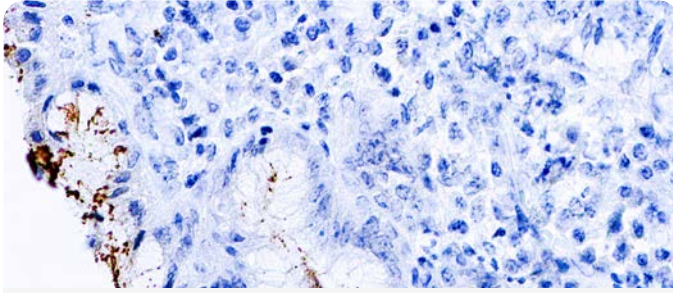


Formalin fixed paraffin embedded human infected tissue stained with H.pylori.

**H. pylori**  

<b>Catalog No.:</b>	RP169 Concentrated PDR169 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Total Lysate of H.Pylori
<b>Positive Control:</b>	Infected stomach
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with the 54 kDa (flagellin) of H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.



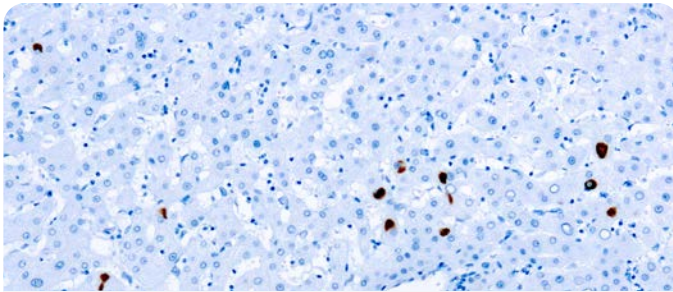
Formalin fixed paraffin embedded human stomach infected with *H. pylori* and stained with *H. pylori* antibody.

### **H. pylori (Helicobacter pylori)**



<b>Catalog No.:</b>	RP016 Concentrated PDR053 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Total lysate of <i>H. pylori</i> .
<b>Positive Control:</b>	Infected stomach
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with the whole *H. pylori*. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. *H. pylori* is known to cause peptic ulcer and chronic gastritis in humans.



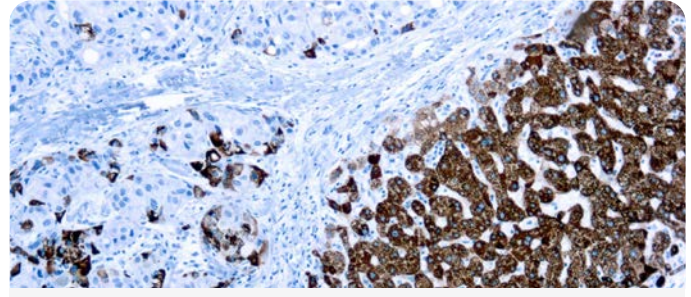
Formalin fixed paraffin embedded human liver stained with Hepatitis B Surface Antigen.

### **HBsAg**



<b>Catalog No.:</b>	Mob570R Concentrated PDM570R Prediluted
<b>Clone:</b>	5C3
<b>Immunogen:</b>	HBsAg (ad/ay) protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Infected liver
<b>Cellular Localization:</b>	Cytoplasmic

This antibody stains the cytoplasm of antigen-positive liver cells in patients with Type B viral hepatitis. This antibody reacts with the 'a' determinant present on the HBsAg subtypes ayw1, ayw2, ayw3, ayw4, ayr, adw2, adw4 and adr. It does not react with normal tissues.



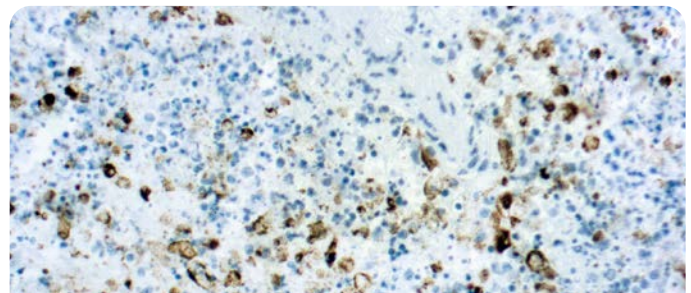
Formalin fixed paraffin embedded liver stained with Hepatocyte Specific Antigen antibody.

### **Hepatocyte Specific Antigen (HSA/HepPar-1)**



<b>Catalog No.:</b>	Mob426 Concentrated PDM162 Prediluted
<b>Clone:</b>	OCH1E5
<b>Immunogen:</b>	Human liver fixed in formalin.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Liver
<b>Cellular Localization:</b>	Cytoplasmic

Hepatoblastoma is the most common primary tumor of the liver in children. The use of specific hepatocyte markers and also of a fetoprotein or carcinoembryonic antigen are useful for the identification of normal and malignant fetal hepatocytes. This antibody recognizes an uncharacterized antigen present in both adults and fetal normal hepatocytes to produce a distinct granular cytoplasmic staining. This antibody stains majority of hepatocellular carcinomas.



Formalin fixed paraffin embedded human infected tissue stained with Herpes Simplex Virus Type II antibody.

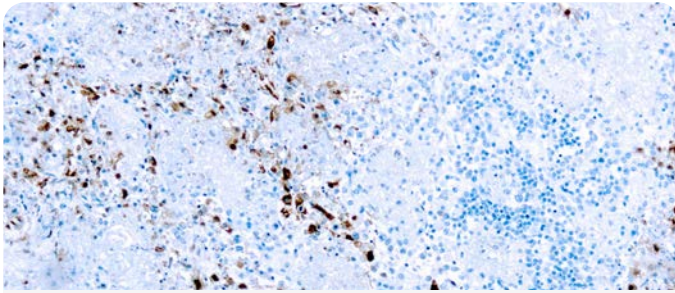
### **Herpes Simplex Virus Type II (HSV II)**



<b>Catalog No.:</b>	Mob542, Mob542R - Concentrated PDM542, PDM542R - Prediluted
<b>Clone:</b>	DBM15.69
<b>Immunogen:</b>	BALB/C mice were immunized with Parker strain of herpes simplex virus type 2.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Infected tissue
<b>Cellular Localization:</b>	Cytoplasmic, nuclear

This antibody reacts with herpes simplex virus type 2. It is specific for the viral glycoprotein D (gD) protein.



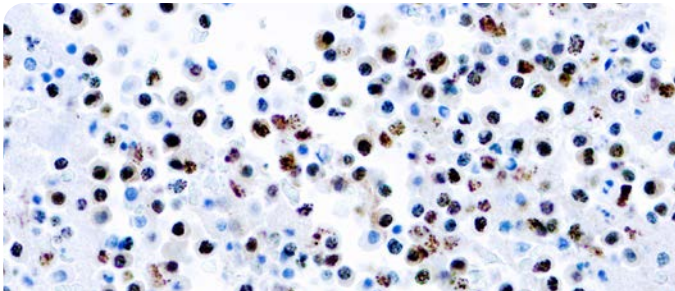


Formalin fixed paraffin embedded Infected tissue stained with HSV I antibody.

**Herpes Simplex Virus Type I (HSV1)**  **IVD** **RUO**

<b>Catalog No.:</b>	RP018, RP018R - Concentrated PDR032, PDR032R - Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Whole rabbit corneal cells, infected with herpes simplex virus type I (strain Mac Intyre), were solubilized with detergent.
<b>Positive Control:</b>	Infected tissue
<b>Cellular Localization:</b>	Cytoplasmic, nuclear

This antibody reacts with HSV type I specific antigens and with antigens common to HSV type I and II virus. It reacts with all the major glycoproteins present in the viral envelope as well as with at least one core protein.

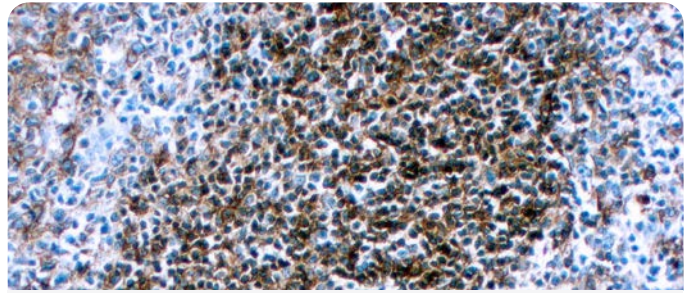


Cultured cells infected with HHV8 stained with HHV8 antibody.

**Herpesvirus 8 (HHV8)**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob395, Mob395R - Concentrated PDM395, PDM395R - Prediluted
<b>Clone:</b>	LN53
<b>Immunogen:</b>	Recombinant protein corresponding to the latent nuclear antigen-1 molecule of HHV8.
<b>Isotype:</b>	IgG2c
<b>Positive Control:</b>	Karposi sarcoma
<b>Cellular Localization:</b>	Nuclear

This antibody stains with ORF-73 of human herpesvirus 8 (HHV8). HHV8 is the likely etiological agent of Kaposi sarcoma (KS). HHV8 encodes a latent nuclear antigen (LNA), which is the product of the viral gene ORF 73. LNA is capable of forming a complex with retinoblastoma susceptibility gene product, which may be related to its oncogenic activity.

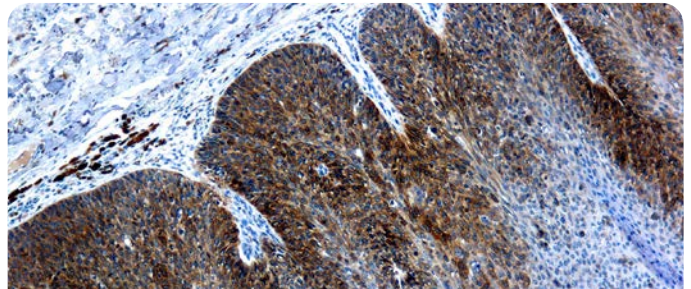


Formalin fixed paraffin embedded human tonsil stained with HLA-DR antibody.

**HLA-DR (β chain of DP, DQ & DR)**  **RUO**

<b>Catalog No.:</b>	Mob069R Concentrated PDM082R Prediluted
<b>Clone:</b>	CR3/43
<b>Immunogen:</b>	Tonsil cells
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with the β chain of all products of the gene sub regions DP, DQ, and DR. It stains B cells, interdigitating reticulum cells, Langerhans cells and many macrophages. This antibody does not react with normal T cell and polymorphs but stains activated T cells.

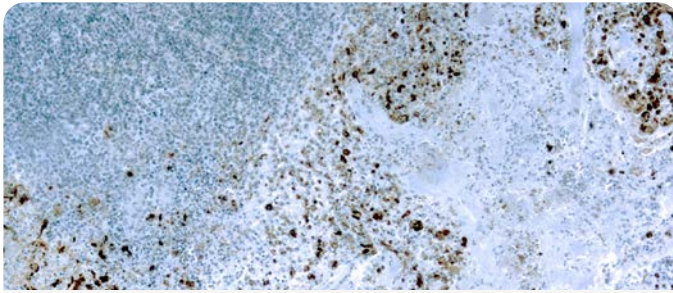


Formalin fixed paraffin embedded cervix Ca stained with HPV-16 antibody.

**Human Papilloma Virus Type 16 (HPV 16)**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob394, Mob394R - Concentrated PDM166, PDM166R - Prediluted
<b>Clone:</b>	CAMVIR-1
<b>Immunogen:</b>	BALB/C mice were immunized with recombinant HPV-16 L1 protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	HPV type 16 infected cervix
<b>Cellular Localization:</b>	Nuclear

This antibody stains with HPV type 16. L1 protein is a major capsid protein of HPV type 16. HPV 6 and 11 have been associated with relatively benign diseases such as genital warts but type 16 and 18 are strongly associated with cervical, vaginal and vulvar malignancies.



Formalin fixed paraffin embedded human infected tissue stained with Herpes Simplex Virus Type I and Type II antibody.

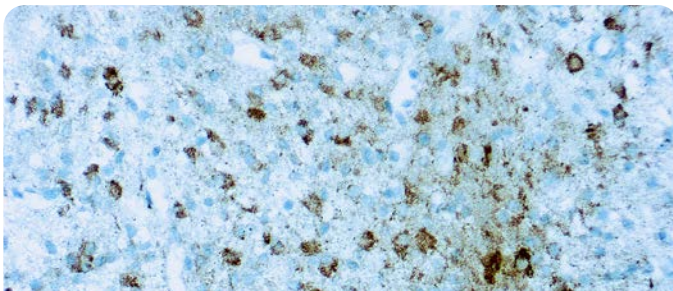
### HSV Cocktail

(Rabbit anti-HSV I + Mouse anti-HSV II)



<b>Catalog No.:</b>	PDRM001, PDRM001R Prediluted
<b>Clone:</b>	Rabbit and DBM 15.69
<b>Immunogen:</b>	Whole rabbit corneal cells, infected with herpes simplex virus type I (strain Mac Intyre) and BALB/C mice immunized with Parker strain of herpes simplex virus type 2.
<b>Positive Control:</b>	Infected tissue
<b>Cellular Localization:</b>	Cytoplasmic, nuclear

This antibody reacts with HSV type I and II specific antigens and with antigens common to HSV type I and II virus. It reacts with all the major glycoproteins present in the viral envelope as well as with at least one core protein.



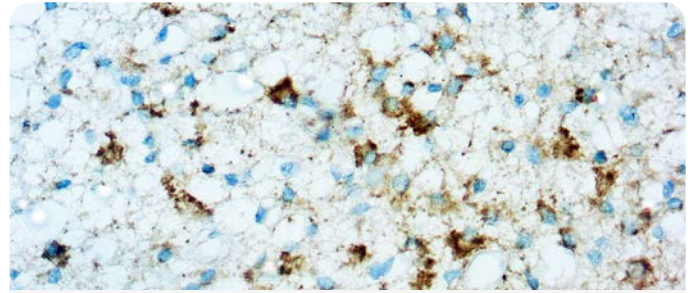
Formalin fixed paraffin embedded Anaplastic Oligodendrogliom stained with IDH1.

### IDH1



<b>Catalog No.:</b>	Mob580R Concentrated PDM580R Prediluted
<b>Clone:</b>	Hmab-1
<b>Immunogen:</b>	KLH-conjugated linear peptide corresponding to human Isocitrate Dehydrogenase 1 (IDH1).
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Human Glioma tissue
<b>Cellular Localization:</b>	Cytoplasm

Monoclonal Anti-IDH1 (R132H) recognizes only the R132H mutation of human IDH1 (R132H) and does not cross react with other mutations. The most frequent known mutation (>90%) is the alteration of arginine to histidine (R132H).<sup>6</sup> Hence, antibodies that recognize the IDH1R132H mutation can be useful for the diagnosis of mutation-bearing tumors like gliomas.



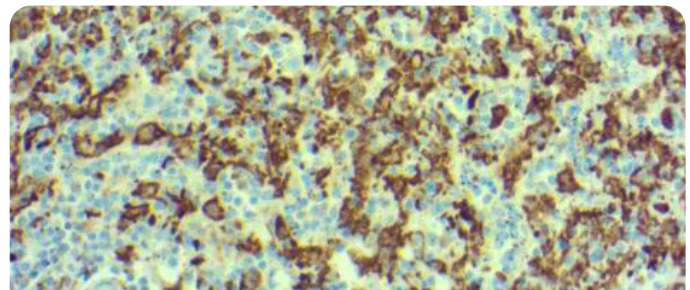
Formalin fixed paraffin embedded Anaplastic Oligodendrogliom stained with IDH1.

### IDH1



<b>Catalog No.:</b>	Mob582R Concentrated PDM582R Prediluted
<b>Clone:</b>	Smab-1
<b>Immunogen:</b>	KLH-conjugated linear peptide corresponding to human Isocitrate Dehydrogenase 1 (IDH1)-R132S.
<b>Isotype:</b>	IgG1k
<b>Positive Control:</b>	Human Glioma tissue
<b>Cellular Localization:</b>	Cytoplasmic/nuclear

Isocitrate dehydrogenase 1 (IDH1) is a 46 kDa NADP-dependent enzyme, which catalyzes the decarboxylation of isocitrate into  $\alpha$ -ketoglutarate. IDH1 may also play a role in the prevention of oxidative damage, and the shuttling of proteins to peroxisomes. It is widely reported that mutations in IDH1 result in multiple forms of gliomas. The Arginine to Serine substitution at amino acid 132 is seen in gliomas, abolishes magnesium binding and alters enzyme activity so that isocitrate is no longer converted to  $\alpha$ -ketoglutarate but instead  $\alpha$ -ketoglutarate is converted to R(-)-2-hydroxyglutarate.



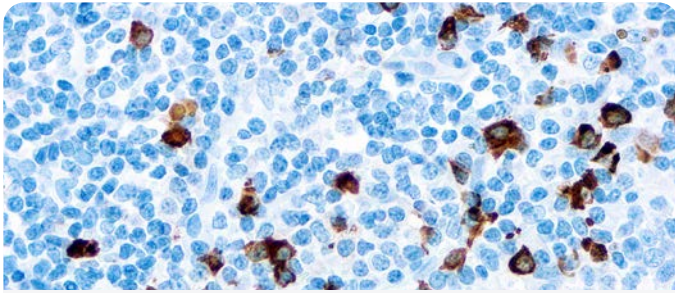
Formalin fixed paraffin embedded human spleen tissue stained with Iba1

### Iba1



<b>Catalog No.:</b>	Mob602 Concentrated PDM602 Prediluted
<b>Clone:</b>	AIF1
<b>Immunogen:</b>	Purified fragment of human recombinant AIF1 protein (around aa 1-146) (exact sequence is proprietary)
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Spleen
<b>Cellular Localization:</b>	Cytoplasmic and Cell Surface

Actin-binding protein that enhances membrane ruffling and RAC activation. Enhances the actin-bundling activity of LCP1. Binds calcium. Plays a role in RAC signaling and in phagocytosis. AIF1 colocalizes with actin, and upon stimulation, translocates to lamellipodia. It is also a marker of human microglia and is expressed by macrophages in injured skeletal muscle.

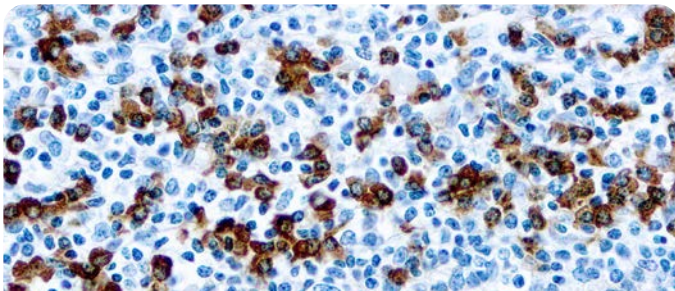


Formalin fixed paraffin embedded human tonsil stained with IgA antibody.

**IgA**  **IVD**

<b>Catalog No.:</b>	RP020 Concentrated PDR017 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	IgA isolated from a pool of normal human sera.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with  $\alpha$ -chains of human IgA. This antibody has been adsorbed to a very high level of specificity.

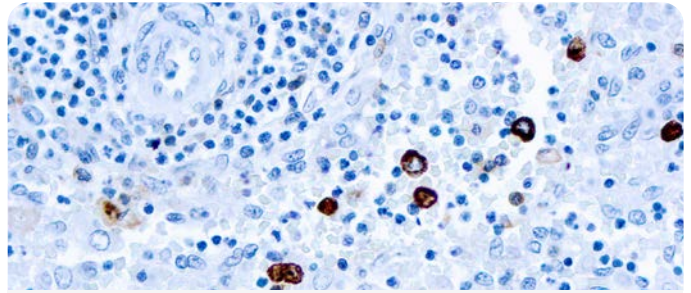


Formalin fixed paraffin embedded human tonsil stained with IgG antibody.

**IgG**  **IVD**

<b>Catalog No.:</b>	RP023 Concentrated PDR018 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	IgG isolated from a pool of normal human sera.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with  $\gamma$ -chains of human IgG. Nonspecific antibodies have been removed by solid-phase adsorption.

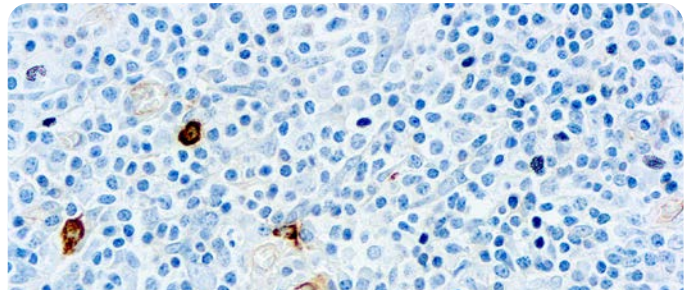


Formalin fixed paraffin embedded human spleen stained with IgM antibody.

**IgM**  **IVD**

<b>Catalog No.:</b>	Mob074 Concentrated PDM053 Prediluted
<b>Clone:</b>	R1/69
<b>Immunogen:</b>	Human lymphoid cells.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasm

This antibody reacts with the heavy chain present in all types of human IgM. It stains B cell follicles in human lymphoid tissues. In lymphoid tissues, IgM containing plasma cells stain strongly but immune complexes are usually undetectable.



Formalin fixed paraffin embedded human tonsil stained with IgM antibody.

**IgM**  **IVD**

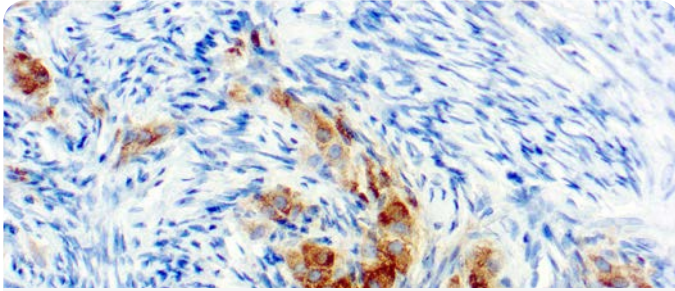
<b>Catalog No.:</b>	RP024 Concentrated PDR019 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	IgM isolated from human serum of a patient.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with the  $\mu$ -chains of human IgM. Nonspecific antibodies have been removed by solid-phase adsorption.

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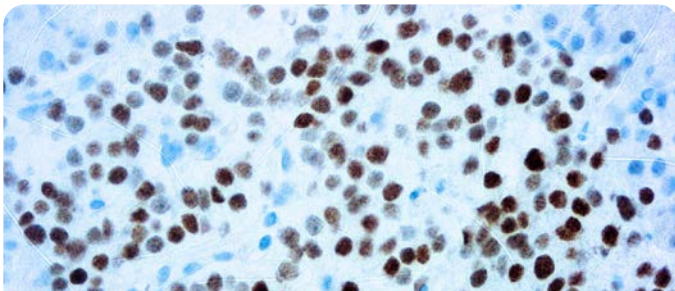


Formalin fixed paraffin embedded human ovary stained with Inhibin  $\alpha$  antibody.

**Inhibin  $\alpha$**   **IVD**

<b>Catalog No.:</b>	Mob435 Concentrated PDM178 Prediluted
<b>Clone:</b>	R1
<b>Immunogen:</b>	Synthetic peptide corresponding to the 1-32 amino terminal peptide of the $\alpha$ subunit of human inhibin.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Ovary
<b>Cellular Localization:</b>	Cytoplasmic

Inhibin is a dimeric glycoprotein hormone from the TGF- $\beta$  family made of  $\alpha$  and  $\beta$  subunits. This antibody recognizes the 32kDa  $\alpha$  subunit of human inhibin. Inhibin  $\alpha$  is expressed in a wide variety of human tissues, such as brain, prostate, adrenal, granulose cells of ovary, sertoli cells of testis and in fetoplacental unit.

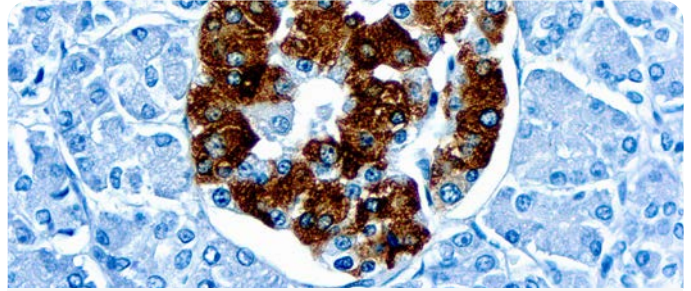


Formalin fixed paraffin embedded human Pancreas stained with INSM1 25x.

**INSM1**  **IVD**

<b>Catalog No.:</b>	Mob586 Concentrated PDM586 Prediluted
<b>Clone:</b>	A-8
<b>Immunogen:</b>	Amino acid 81-125 at the N-terminus of human INSM1.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Neuroendocrine tumor
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is raised against amino acids 81-125 mapping near the N-terminus of INSM1 of human origin.

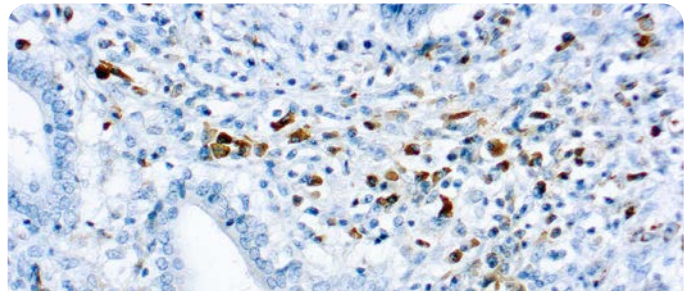


Formalin fixed paraffin embedded human pancreas stained with Insulin antibody.

**Insulin**  **IVD**

<b>Catalog No.:</b>	Mob234 Concentrated
<b>Clone:</b>	K36aC10
<b>Immunogen:</b>	Human insulin.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes purified insulin from the pancreas of human, as well as proinsulin from human.



Formalin fixed paraffin embedded human Tonsil stained with Kappa Light Chain.

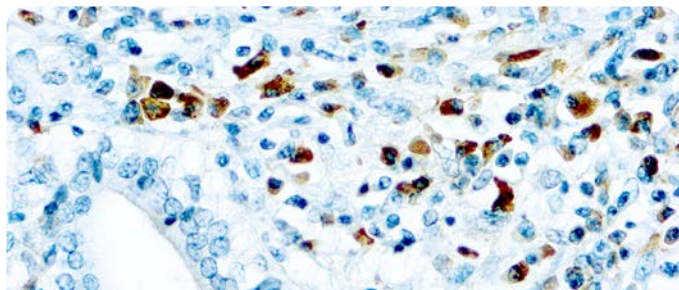
**Kappa Light Chain**  **IVD**

<b>Catalog No.:</b>	RP025 Concentrated PDR015 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	kappa light chains isolated from pooled urine of patients with Bence Jones proteinuria.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with free as well as bound kappa light chains. Contaminating antibodies have been removed by solid phase adsorption.



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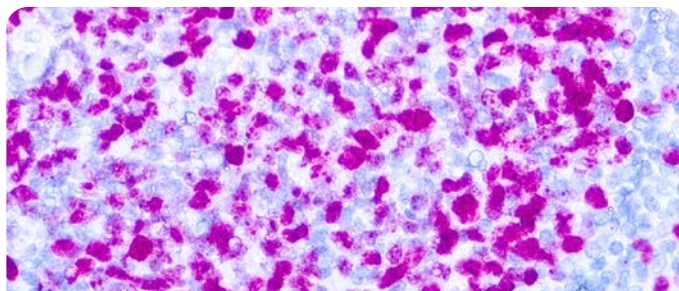


Formalin fixed paraffin embedded human tonsil stained with Kappa Light Chain antibody.

**Kappa Light Chain**  

<b>Catalog No.:</b>	Mob544 Concentrated PDM055 Prediluted
<b>Clone:</b>	KP-53
<b>Immunogen:</b>	BALB/C mice were immunized with purified Bence Jones kappa light chain protein.
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasm

This antibody reacts with B cell follicles in human lymphoid tissues. The mantle zones give a mosaic pattern, while the germinal centers show a coarse meshwork pattern of staining. This antibody stains free as well as bound kappa light chains. This antibody does not react with human lambda light chain.

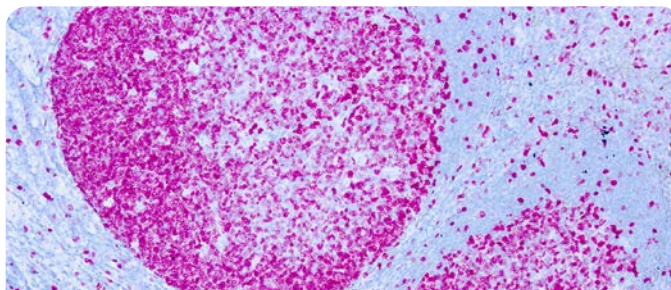


Formalin fixed paraffin embedded human tonsil stained with Ki-67 antibody.

**Ki-67**  

<b>Catalog No.:</b>	RP026 Concentrated PDR048 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Synthetic peptide from 62 base pair region of the human Ki-67 antigen.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a nuclear antigen present in proliferating human cells. It can be used to evaluate the Ki-67 labeling index in various tumors.

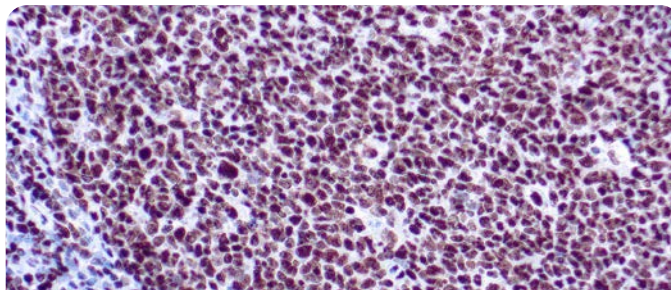


Formalin fixed paraffin embedded human tonsil stained with Ki-67 antibody.

**Ki-67**  

<b>Catalog No.:</b>	RMAB004 Concentrated RMPD004 Prediluted
<b>Clone:</b>	SP6
<b>Immunogen:</b>	A synthetic peptide from C-terminus of human Ki-67.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

Ki-67 is a nuclear protein, which is expressed in proliferating cells. Ki-67 is preferentially expressed during late G1-, S-, M-, and G2-phases of the cell cycle, while cells in the G0 (quiescent) phase are negative for this protein.

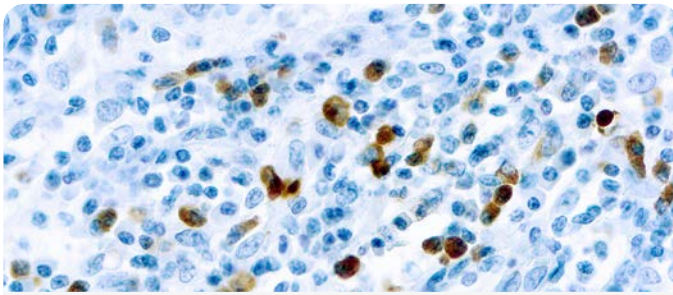


Formalin fixed paraffin embedded human tonsil stained with Ku(p70) antibody

**Ku (p70)**  

<b>Catalog No.:</b>	Mob557 Concentrated
<b>Clone:</b>	H-6
<b>Immunogen:</b>	Ku-(p70) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 583-608 at the C-terminus of KU-70 of human origin.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a 70 kD protein known as Ku (p70). The Ku protein is localized in the nucleus and is composed of subunits referred to as Ku-70 (or p70) and Ku-86 (or p86). Both subunits of the Ku protein have been cloned, and a number of functions have been proposed for Ku, including cell signaling, DNA replication and transcriptional activation. Ku is involved in Pol II-directed transcription by virtue of its DNA binding activity, serving as the regulatory component of the DNA-associated protein kinase that phosphorylates Pol II and transcription factor Sp.



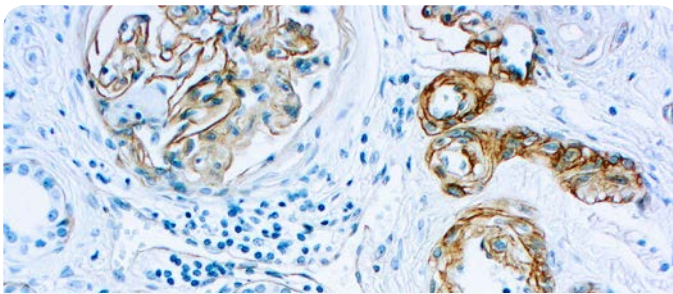
Formalin fixed paraffin embedded human tonsil stained with Lambda Light Chain antibody.

**Lambda Light Chain**



<b>Catalog No.:</b>	RP027 Concentrated PDR016 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Lambda light chains isolated from pooled urine of patients with Bence Jones proteinuria.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with free as well as bound lambda light chains. Contaminating antibodies have been removed by solid phase adsorption.



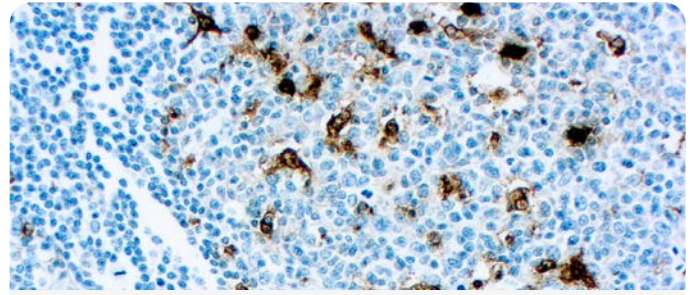
Formalin fixed paraffin embedded renal carcinoma stained with Laminin antibody.

**Laminin**



<b>Catalog No.:</b>	Mob202 Concentrated PDM568 Prediluted
<b>Clone:</b>	4C7
<b>Immunogen:</b>	The A chain of human laminin.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Skin
<b>Cellular Localization:</b>	Basement membrane

This antibody reacts with the terminal globular domain of the A chain. The staining with this antibody is sensitive to fixation of paraffin tissues and use of proteolytic enzymatic treatment.



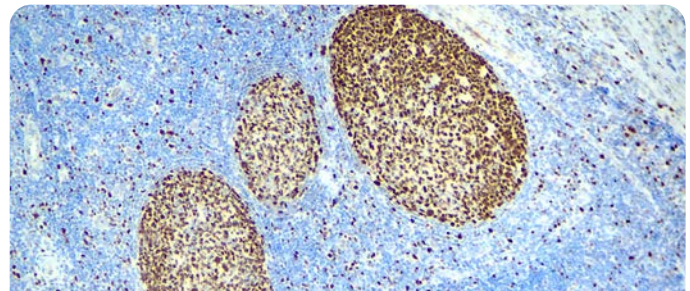
Formalin fixed paraffin embedded human tonsil stained with Lysozyme antibody

**Lysozyme/Muramidase**



<b>Catalog No.:</b>	RP028 Concentrated PDR005 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Lysozyme isolated from urine of patients with monocytic leukemia.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with lysozyme. It stains granulocytes, monocytes and macrophages in human tonsil, skin and colon. This antibody does not cross-react with any other cell types.



Formalin fixed paraffin embedded human Tonsil stained with MCM7.

**MCM7**

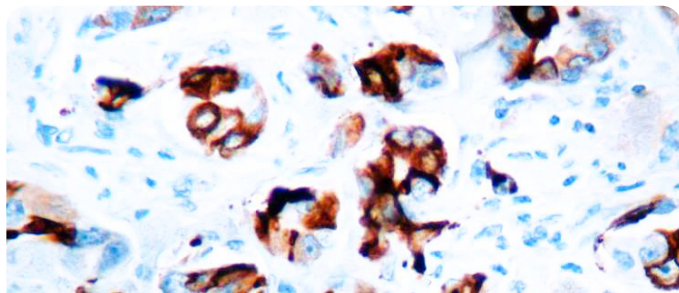


<b>Catalog No.:</b>	Mob612, Mob612R - Concentrated PDM612, PDM612R - Prediluted
<b>Clone:</b>	MCM7/1466
<b>Immunogen:</b>	Recombinant human MSM7 protein fragment
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

MCM7 is one of the highly conserved mini-chromosome maintenance proteins (MCM) that is essential for the initiation of eukaryotic genome replication. The MCM complex consisting of this protein and MCM2, 4 and 6 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. Cyclin D1-dependent kinase, CDK4, is found to associate with this protein, and may regulate the binding of this protein with the tumor suppressor protein RB1/RB.

**POLYVIEW™**  
Two Step DAB Detection System

**Two Step**

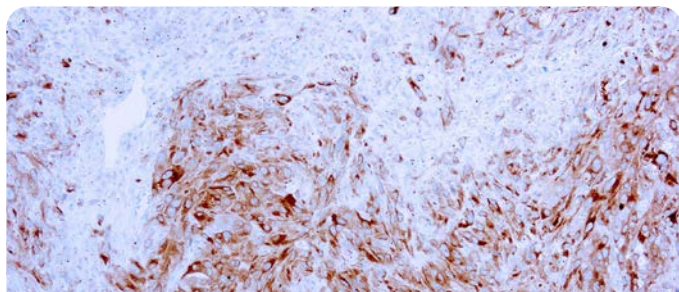


Formalin fixed paraffin embedded human breast stained with Mammaglobin-A

**Mammaglobin-A**  

<b>Catalog No.:</b>	RMAB036 Concentrated RMPD036 Prediluted
<b>Clone:</b>	EPR9092
<b>Immunogen:</b>	A recombinant protein fragment corresponding to human Mammaglobin A
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

Mammaglobin-A is highly overexpressed in breast cancer cell lines and primary breast tumors. This pattern of expression is restricted to mammary epithelium and metastatic breast tumors. Thus, mammaglobin-A- specific T cell immune responses may provide an important approach for the design of breast cancer-specific immunotherapy.

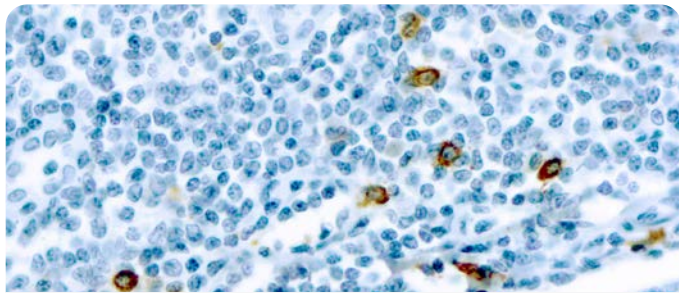


Formalin fixed paraffin embedded human melanoma stained with MART-1 antibody.

**MART-1**  

<b>Catalog No.:</b>	Mob277 Concentrated PDM153 Prediluted
<b>Clone:</b>	A103
<b>Immunogen:</b>	BALB/C mice were injected with recombinant MART-1 protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a protein of 20 kDa known as MART-1 (melanoma antigen recognized by T cells-1) or Melan-A. This antibody does not cross-react with MAGE-1or tyrosinase. MART-1 is a newly identified melanocyte differentiation antigen recognized by autologous cytotoxic T lymphocytes. This antibody stains melanomas and other tumors showing melanocytic differentiation.

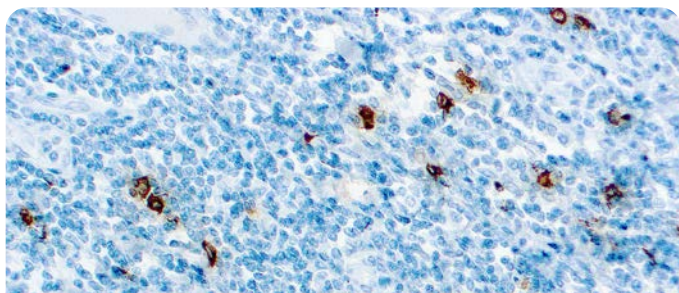


Formalin fixed paraffin embedded human tonsil stained with Mast Cell Chymase antibody.

**Mast Cell Chymase**  

<b>Catalog No.:</b>	Mob346 Concentrated PDM159 Prediluted
<b>Clone:</b>	CC1
<b>Immunogen:</b>	BALB/C mice were injected with a purified human skin chymase.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. Mast cells contain a number of preformed chemicals mediators such as histamine, chymase, carboxypeptidase, and proteolytic trypase. Human mast cell chymase is considered to be an important marker of mast cells and is an important mediator of inflammation.

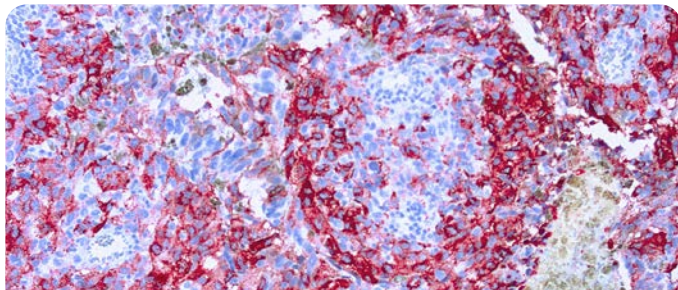


Formalin fixed paraffin embedded human tonsil stained with Mast Cell Trypsase antibody.

**Mast Cell Trypsase**  

<b>Catalog No.:</b>	Mob347 Concentrated PDM160 Prediluted
<b>Clone:</b>	AA1
<b>Immunogen:</b>	BALB/C mice were injected with a purified human lung trypase.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. This antibody does not bind with any other cell type. Mast cells contain a number of preformed chemicals mediators such as histamine, chymase, carboxypeptidase, and proteolytic trypase. Human mast cell trypase is considered to be an important marker of mast cell activation and is an important mediator of inflammation.



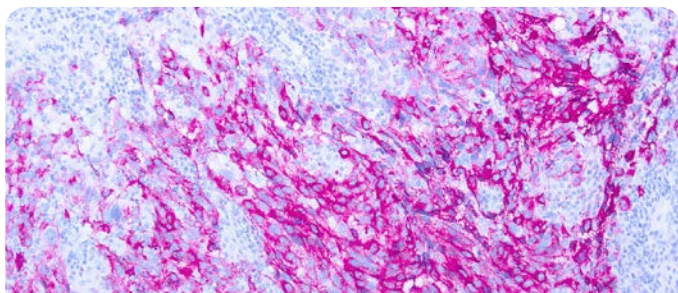
Formalin fixed paraffin embedded human melanoma stained with Melanoma antibody.

### Melanoma (HMB45)



<b>Catalog No.:</b>	Mob079 Concentrated PDM011 Prediluted
<b>Clone:</b>	HMB45
<b>Immunogen:</b>	BALB/C mice were injected with extract of pigmented melanoma metastases from lymph nodes.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasm

This antibody reacts with a neuraminidase sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes. It reacts with junctional and blue nevus cells. Non-melanocytic cells are negative.



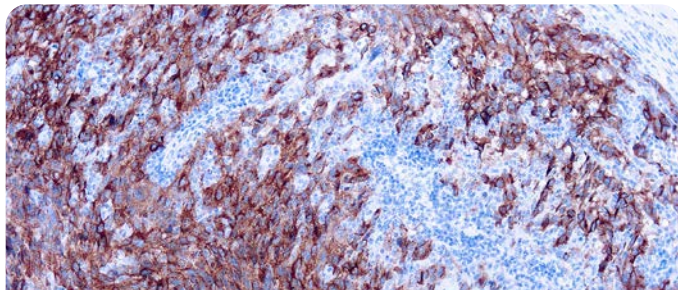
Formalin fixed paraffin embedded human melanoma stained with Melanoma antibody.

### Melanoma



<b>Catalog No.:</b>	Mob421 Concentrated PDM213 Prediluted
<b>Clone:</b>	PNL2
<b>Immunogen:</b>	Synthetic peptide.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic, membrane

This antibody labels melanocytes and is a useful tool for the identification of melanomas and clear cell sarcomas. Anti-Melanoma, PNL2, seems to be a melanocyte antibody of autoimmune origin as it does not react with the non-melanocytic peptide antigen used for immunization.



Formalin fixed paraffin embedded human melanoma stained with Melanoma Cocktail.

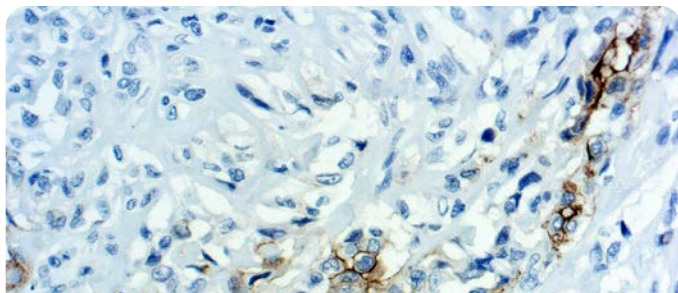
### Melanoma Cocktail

(HMB45 + Tyrosinase + MART-1)



<b>Catalog No.:</b>	Mob428 Concentrated PDM146 Prediluted
<b>Clone:</b>	HMB45 + T311 + A103
<b>Immunogen:</b>	Pigmented melanoma metastases from lymph nodes (HMB45) Recombinant human MART-1 protein (A103). Recombinant tyrosinase protein T311.
<b>Isotype:</b>	HMB45 and A103, IgG1; T311, IgG2a
<b>Positive Control:</b>	Metastatic melanoma in lymph node
<b>Cellular Localization:</b>	Cytoplasmic

The HMB45 clone reacts with a neuraminidase-sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes. The combination of HMB45, MART-1 and tyrosinase make this triple antibody cocktail a first-order pan melanoma screener.



Formalin fixed paraffin embedded mesothelioma stained with Mesothelin.

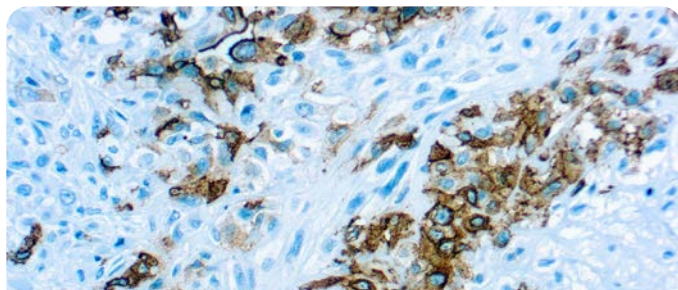
### Mesothelin



<b>Catalog No.:</b>	RMAB107 Concentrated RMPD107 Prediluted
<b>Clone:</b>	YP158
<b>Immunogen:</b>	Synthetic peptide corresponding to C-terminus of human mesothelin protein.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Mesothelioma
<b>Cellular Localization:</b>	Cell membrane

Mesothelin is a glycosylphosphatidylinositol-linked cell-surface glycoprotein, which is present on the surface of normal mesothelium and is overexpressed in many patients with epithelial ovarian cancer and malignant mesotheliomas.





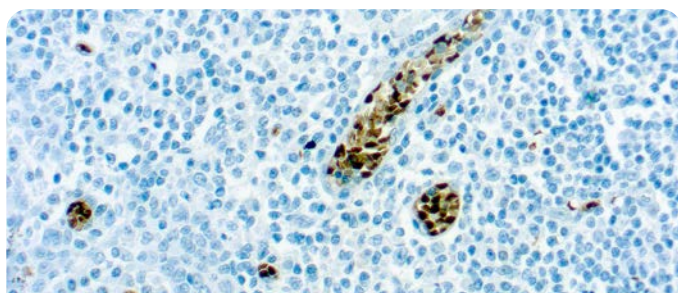
Formalin fixed paraffin embedded human mesothelioma stained with Mesothelioma antibody.

**Mesothelioma**



<b>Catalog No.:</b>	Mob349 Concentrated PDM134 Prediluted
<b>Clone:</b>	HBME-1
<b>Immunogen:</b>	BALB/C mice were injected with suspension of human mesothelioma cells from patients with malignant epithelial mesothelioma.
<b>Isotype:</b>	IgM
<b>Positive Control:</b>	Mesothelioma
<b>Cellular Localization:</b>	Cell membrane

This antibody reacts with an unknown antigen on microvilli of mesothelioma cells. It stains normal mesothelial cells as well as epithelial mesotheliomas in a thick membrane pattern due to abundant lung microvilli on the surface of these cells.



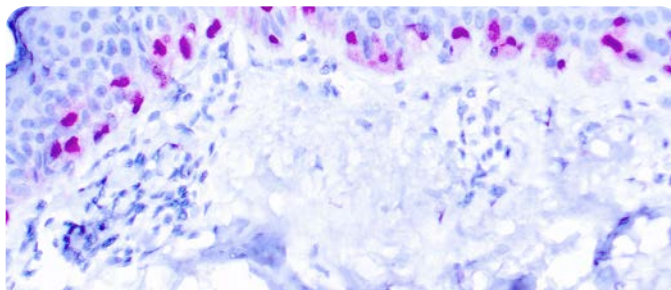
Formalin fixed paraffin embedded human Tonsil stained with MGMT

**MGMT**  
(O(6)-Methylguanine-DNA-Methyltransferase)



<b>Catalog No.:</b>	Mob423 Concentrated PDM423 Prediluted
<b>Clone:</b>	MT3.1
<b>Immunogen:</b>	Recombinant human MGMT protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear and cytoplasmic

O(6)-methylguanine-DNA-methyltransferase (MGMT) is a 22 kDa human DNA repair protein that removes O(6)-alkylguanine DNA adducts. MGMT acts as a suicide acceptor protein repairing the DNA by accepting alkyl groups and consequently inactivating itself. This antibody stains all mantle zone lymphocytes and 50% of germinal center lymphocytes. Basaloid epithelial cells of tonsil squamous mucosa are also stained positive with this antibody.



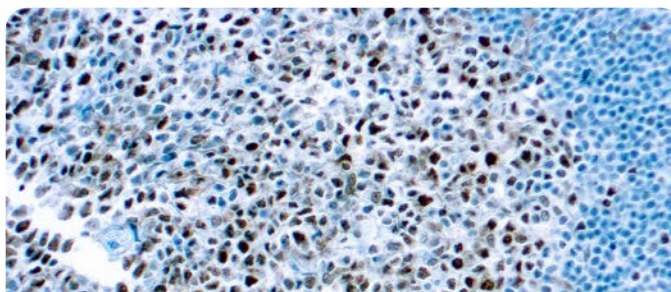
Formalin fixed paraffin embedded human skin stained with MiTF antibody.

**Microphthalmia Transcription Factor (MiTF)**



<b>Catalog No.:</b>	Mob462 Concentrated PDM168 Prediluted
<b>Clone:</b>	D5
<b>Immunogen:</b>	BALB/C mice were injected with N-terminal fragment of human Mi protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a 52-56 kDa protein known as microphthalmia (Mi). This antibody reacts with both melanocytic and non-melanocytic isoforms of Mi. Mi is a basic helix-loop-helix-leucine zipper (b-HLH-ZIP) transcription factor implicated in pigmentation, mast cells and bone development. There are two known isoforms of Mi differing by 66 amino acids at the amino terminus.



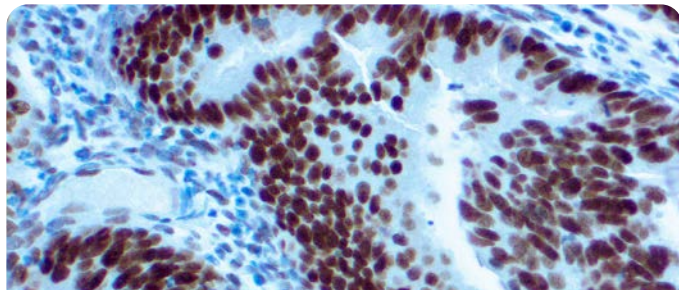
Formalin fixed paraffin embedded human Tonsil stained with MSH2

**MSH2**



<b>Catalog No.:</b>	Mob585 Concentrated PDM585 Prediluted
<b>Clone:</b>	DBM15.82
<b>Immunogen:</b>	BALB/C mice injected with recombinant human MSH2 protein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a 102 kDa protein known as MSH2 (mismatch repair protein 2). MSH2 protein is involved in the initial recognition of mismatched nucleotides during the post replication mismatch repair process. Loss of MSH2 function leads to the accumulation of replication errors, which in turn may be responsible for the multiple mutations required for multistage carcinogenesis.

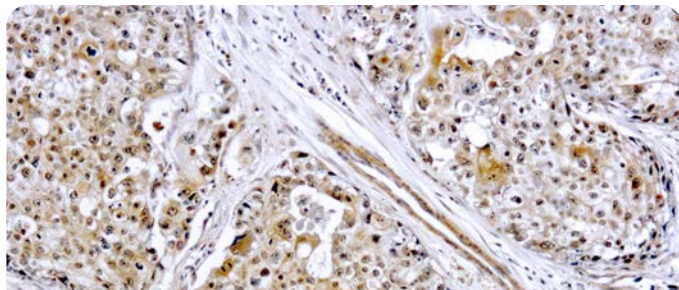


Formalin fixed paraffin embedded human colon carcinoma stained with MLH-1 antibody.

**MLH-1 (Mismatch Repair Protein)** IVD

<b>Catalog No.:</b>	Mob430 Concentrated PDM148 Prediluted
<b>Clone:</b>	G168-15
<b>Immunogen:</b>	Full length recombinant MLH.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil, colon carcinoma
<b>Cellular Localization:</b>	Nuclear

The G168-15 antibody recognizes human and mouse MLH1 (80-85kDa). The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time. It is thought that after MSH2 binds to a mismatched DNA duplex it is joined by a heterodimer of MLH1 and PMSH, which together help facilitate the later steps in mismatch repair.

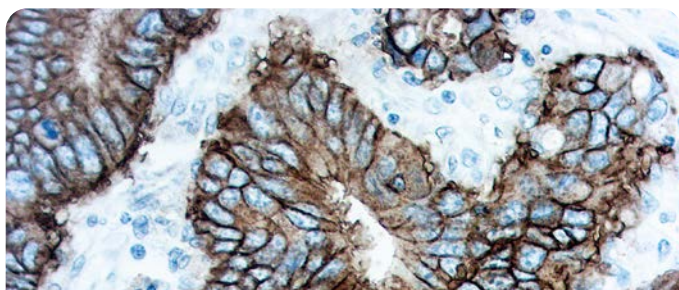


Formalin fixed paraffin embedded human breast carcinoma stained with MMP-9 antibody.

**MMP-9** IVD RUO

<b>Catalog No.:</b>	RP066, RP066R - Concentrated
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide from the middle region of human MMP-9.
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with a 92 kDa pro form and 86 kDa active form of MMP-9. MMPs are proteolytic enzymes capable of degrading connective tissue components. MMPs play a crucial role in tumor cell invasion and metastasis.

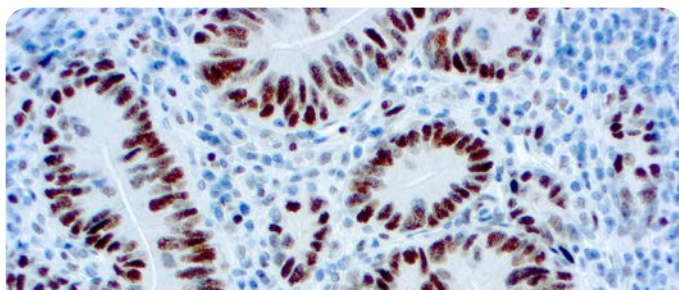


Formalin fixed paraffin embedded human colon carcinoma stained with MOC-31.

**MOC-31** IVD

<b>Catalog No.:</b>	Mob546 Concentrated PDM546 Prediluted
<b>Clone:</b>	MOC-31
<b>Immunogen:</b>	Epithelial antigen, EPG-2
<b>Isotype:</b>	Tissue, cells or virus corresponding to Human EpCAM. Neuraminidase treated GLS-1 human small cell lung carcinoma cells
<b>Positive Control:</b>	Colon and Breast (Normal and Carcinoma)
<b>Cellular Localization:</b>	Cytoplasmic

MOC-31 antibody recognizes an epithelial-associated, glycoprotein located on the cell membrane surface and in the cytoplasm of virtually all epithelial cells. MOC-31 may be used in a panel of antibodies as a negative marker for mesothelioma, or lung adenocarcinoma. Studies have shown that MOC-31 is useful in differentiating tumors of unknown origin in liver cancers and distinguishing cholangiocarcinoma from hepatocellular carcinomas.

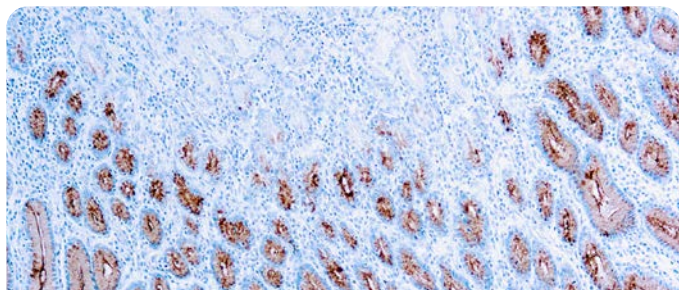


Formalin fixed paraffin embedded human colon carcinoma stained with MSH6 antibody.

**MSH6 (Mismatch Repair Protein)** IVD

<b>Catalog No.:</b>	Mob429 Concentrated PDM147 Prediluted
<b>Clone:</b>	44
<b>Immunogen:</b>	Human MSH6.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil, colon carcinoma
<b>Cellular Localization:</b>	Nuclear

MSH6 is a heterodimer of MSH2 and binds to DNA containing G/T mismatches. The MSH2-MSH6 complex recognizes a single-base mispair insertion/deletion loop. Studies have shown the mutations of MLH-1, MSH2 and MSH6 genes contribute to the development of sporadic colorectal carcinoma. The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time.

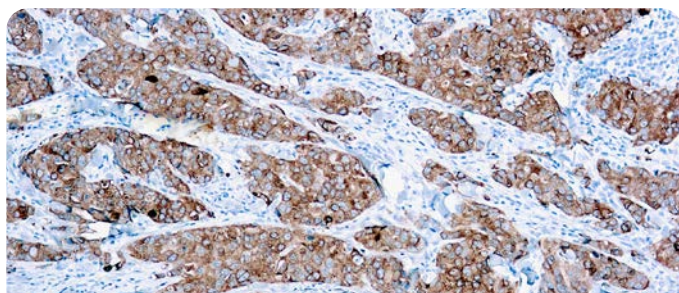


Formalin fixed paraffin embedded human stomach stained with Mucin 5AC antibody.

**Mucin 5AC/Gastric Mucin**  

<b>Catalog No.:</b>	Mob357 Concentrated PDM163 Prediluted
<b>Clone:</b>	45M1
<b>Immunogen:</b>	BALB/C mice were injected with M1 mucin preparation from the fluid of an ovarian mucinous cyst belonging to an O Le (a-b) patient.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Stomach
<b>Cellular Localization:</b>	Cytoplasmic, cell surface

This antibody reacts with a 1000 kDa protein and recognizes the peptide core of gastric mucin M1. Mucins are high molecular weight glycoproteins with 80% carbohydrates and 20% core protein. Gastric mucin M1 antigen is found in columnar mucus cells of surface gastric epithelium and in goblet cells of the fetal and precancerous colon but not in normal colon. Resurgence of gastric mucin during colonic carcinogenesis is suggestive of either re-expression of the peptide core of gastric mucin in the adult colon or changes in the glycosylation pattern of mucin, which expose the hidden M1 antigen.

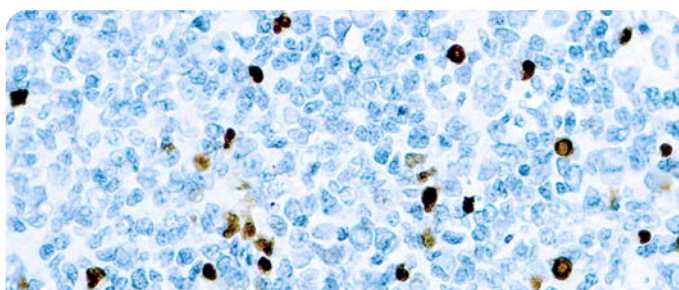


Formalin fixed paraffin embedded human breast carcinoma stained with MUC1/CA15-3

**MUC1/CA15-3**  

<b>Catalog No.:</b>	Mob549 Concentrated PDM549 Prediluted
<b>Clone:</b>	DBMM1
<b>Immunogen:</b>	Human breast cancer cell line ZR-75-1.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic, cell membrane

This antibody is specific to epithelial membrane antigen (EMA), CA 15-3, or polymorphic epithelial mucin. This antibody stains an underglycosylated MUC1 often present on carcinoma cells.

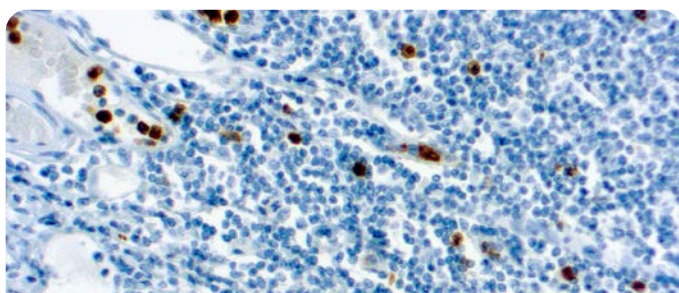


Formalin fixed paraffin embedded human tonsil stained with MUM1 protein antibody.

**MUM1 Protein**  

<b>Catalog No.:</b>	Mob420 Concentrated PDM420 Prediluted
<b>Clone:</b>	MUM1P
<b>Immunogen:</b>	Recombinant GST-MUM1 protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear and cytoplasmic

Multiple myeloma oncogene-1 (MUM1) is a 50kDa protein encoded by the MUM1 gene. This antibody stains MUM1 protein, which is expressed in a subset of B cells in the light zone of the germinal center, plasma cells, activated T cells and a wide spectrum of related hematolymphoid neoplasms. This antibody is useful in the sub classification of lymphoid malignancies.

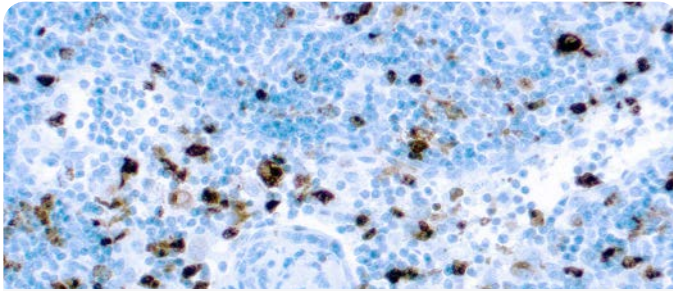


Formalin fixed paraffin embedded human tonsil stained with Myeloperoxidase antibody.

**Myeloperoxidase (MPO)**  

<b>Catalog No.:</b>	Mob551 Concentrated PDM551 Prediluted
<b>Clone:</b>	59A5
<b>Immunogen:</b>	Recombinant protein from exon 7 of the human myeloperoxidase.
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

Myeloperoxidase metabolizes most of the hydrogen peroxide generated by activated phagocytes. This antibody stains strongly with the cytoplasm of myeloid cells. The antibody detects myeloperoxidase found in myeloid cells of acute myeloid leukemia. The myeloperoxidase gene has been localized to chromosome 17.



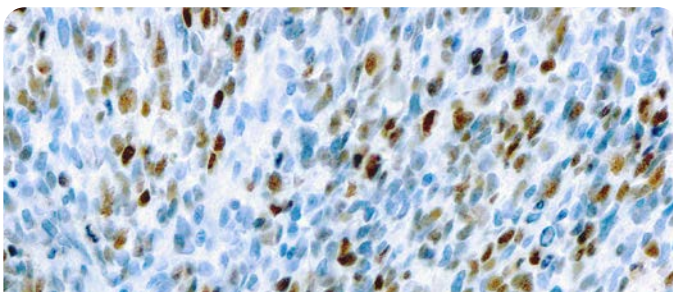
Formalin fixed paraffin embedded human lymphoma stained with Myeloperoxidase antibody.

### Myeloperoxidase (MPO)



<b>Catalog No.:</b>	RP053 Concentrated PDR049 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Myeloperoxidase isolated from human granulocytes.
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with human myeloperoxidase. It stains granules of neutrophils, granulocytes in spleen, bone marrow, tonsil and blood smears.



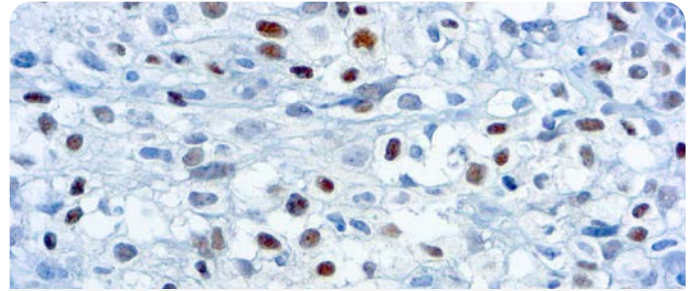
Formalin fixed paraffin embedded rhabdomyosarcoma stained with MyoD1 antibody.

### MyoD1



<b>Catalog No.:</b>	Mob278 Concentrated PDM120 Prediluted
<b>Clone:</b>	5.2F
<b>Immunogen:</b>	BALB/C mice were injected with a recombinant mouse MyoD1 protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Rhabdomyosarcoma
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to a 45 kDa protein, which is identified as MyoD1. This antibody is specific to an epitope of amino acid 3-56 in the N-terminus of mouse MyoD1. This antibody does not react with myogenin, Myf5 or Myf6. MyoD1 stains the nuclei of myoblasts in developing muscle tissues. MyoD1 is not detected in normal adult tissue but is expressed strongly in the tumor cell nuclei of rhabdomyosarcomas.



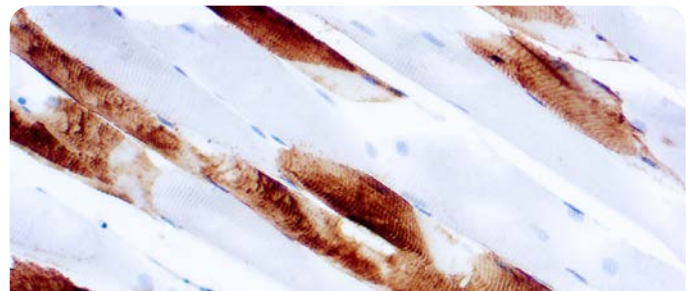
Formalin fixed paraffin embedded human rhabdomyosarcoma stained with Myogenin.

### Myogenin



<b>Catalog No.:</b>	Mob322 Concentrated PDM158 Prediluted
<b>Clone:</b>	F5D
<b>Immunogen:</b>	BALB/C mice were injected with recombinant protein containing rat myogenin amino acid 30-224.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Rhabdomyosarcoma
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to 34 kDa protein known as myogenin. Myogenin is a member of family of myogenic regulatory genes which includes MyoD, myf5 and MRF4. These genes encode a set of transcription factors which are essential for muscle development. Expression of myogenin is restricted to cells of skeletal muscle origin.



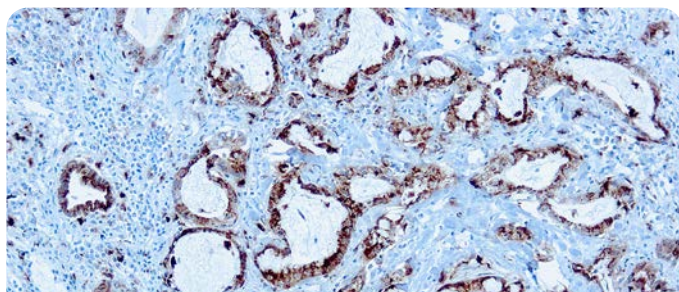
Formalin fixed paraffin embedded human skeletal muscle stained with Myosin antibody

### Myosin, Skeletal (Fast)



<b>Catalog No.:</b>	Mob207 Concentrated PDM085 Prediluted
<b>Clone:</b>	MY32
<b>Immunogen:</b>	Rabbit muscle myosin.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Skeletal muscle
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes heavy chain of human skeletal myosin. It does not stain cardiac or smooth muscle myosin. This antibody stains the fast twitch (type II) isomyosin molecule.

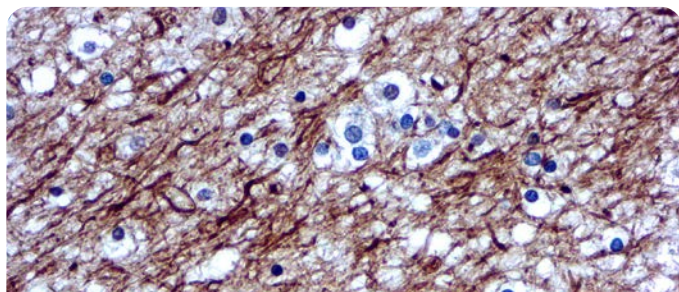


Formalin fixed paraffin embedded lung adenocarcinoma stained with Napsin A.

**Napsin A**  

<b>Catalog No.:</b>	Mob463 Concentrated PDM154 Prediluted
<b>Clone:</b>	KCG1.1
<b>Immunogen:</b>	BALB/C mice were injected with synthetic peptide from N terminus of human napsin A.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Lung adenocarcinoma
<b>Cellular Localization:</b>	Cytoplasmic

Napsin is found in two isoforms, A and B, with highly homologous gene sequences. Napsin A has a molecular weight of 35.0 kDa and is also known as TA02. Napsin A is an aspartic proteinase which is expressed in the lung and involved in processing surfactant protein B (SP-B). It is also expressed in the kidney. This antibody may be a useful tool as a tumor marker for primary lung adenocarcinoma. Napsin expression correlates with the differentiation grade of lung adenocarcinoma.

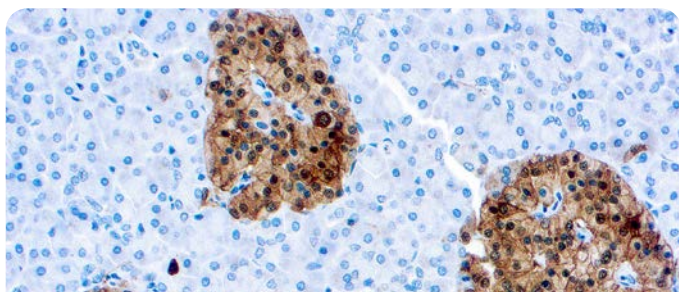


Formalin fixed paraffin embedded human brain stained with Neurofilaments antibody.

**Neurofilament**  

<b>Catalog No.:</b>	Mob080 Concentrated PDM012 Prediluted
<b>Clone:</b>	2F11
<b>Immunogen:</b>	BALB/C mice were injected with purified neurofilaments from human brain.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Brain
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with 70 and 200 kDa component of the neurofilament polypeptide subunit. It stains neurons, neuronal processes and peripheral nerves. This antibody reacts with some neuroblastomas and gangliomas but not with other non-neuronal tumors.

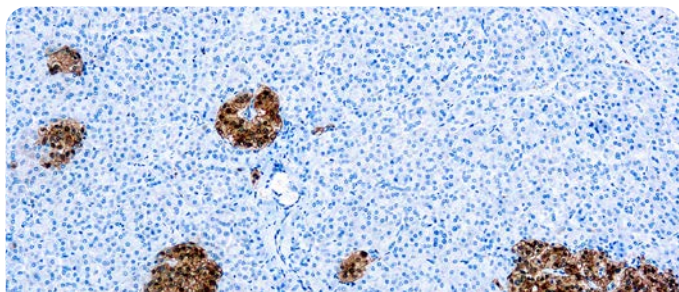


Formalin fixed paraffin embedded human pancreas stained with NSE antibody.

**NSE (Neuron Specific Enolase)**  

<b>Catalog No.:</b>	Mob212 Concentrated PDM321 Prediluted
<b>Clone:</b>	VI-H14
<b>Immunogen:</b>	BALB/C mice were injected with $\gamma$ - $\gamma$ enolase from human brain.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to  $\gamma$ - $\gamma$  enolase isozyme of 46 kDa. This antibody stains neurons, neuroendocrine cells, gangliomas, oat cell carcinomas, astrocytomas, paragangliomas, glioblastomas, pheochromocytomas, melanomas and schwannomas.

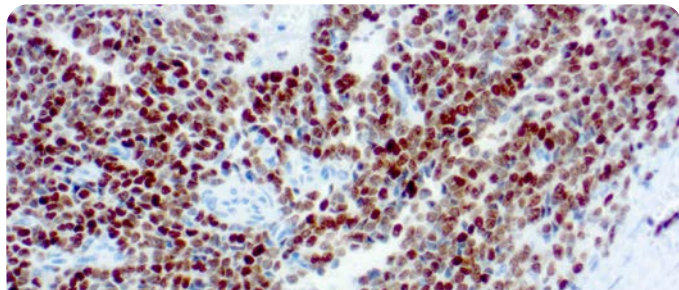


Formalin fixed paraffin embedded human pancreas stained with NSE antibody.

**NSE (Neuron Specific Enolase)**  

<b>Catalog No.:</b>	RP054 Concentrated PDR006 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Neuron specific enolase ( $\gamma$ - $\gamma$ isoenzyme) isolated from bovine brain.
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with human isoenzymes of neuron specific enolase containing  $\gamma$  subunits. This antibody gives a specific staining in neurons of the brain, in islets of Langerhans in pancreas and in peripheral nerves of the skin. No staining with other tissue types has been seen.



Formalin fixed paraffin embedded human Ewing's sarcoma stained with NKX2.2.

**NKX2.2**  **IVD**

<b>Catalog No.:</b>	PDM199 Prediluted
<b>Clone:</b>	DBM15.15
<b>Immunogen:</b>	Human full-length recombinant NKX2.2 protein.
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Ewing's sarcoma
<b>Cellular Localization:</b>	Nuclear

Expression of NKX2.2 has been found in neuroendocrine tumors of the gut, making it a potential marker for the study of gastrointestinal neuroendocrine tumors. More recently, NKX2.2 protein was identified as a target of EWS-FLI-1, the fusion protein specific to Ewing sarcoma, and was shown to be differentially upregulated in Ewing sarcoma on the basis of array-based gene expression analysis. It acts as a valuable marker for Ewing sarcoma and aids in the differential diagnosis of small round cell tumors.

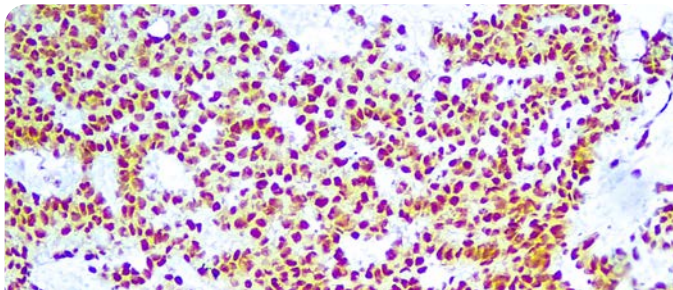


Formalin fixed paraffin embedded human prostate stained with NKX3.1.

**NKX3.1**  **IVD**

<b>Catalog No.:</b>	Mob569 Concentrated PDM569 Prediluted
<b>Clone:</b>	361
<b>Immunogen:</b>	Recombinant His fusion protein corresponding to full length human NKX3-1.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Prostate cancer
<b>Cellular Localization:</b>	Nuclear

The homeodomain-containing transcription factor NKX3-1 is a putative prostate tumor suppressor that is expressed in a largely prostate-specific and androgen-regulated manner. Loss of NKX3-1 protein expression is a common finding in human prostate carcinomas and prostatic intraepithelial neoplasia.

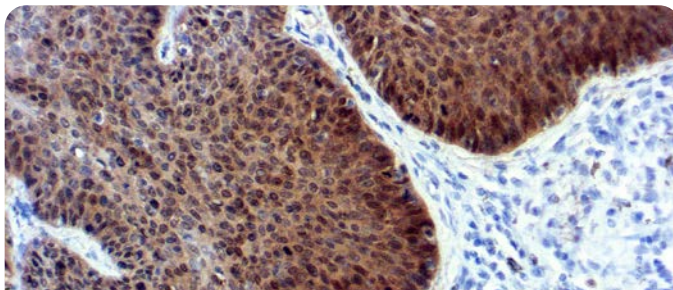


Formalin fixed paraffin embedded human seminoma stained with OCT 3/4

**OCT 3/4**  **IVD**

<b>Catalog No.:</b>	RMAB113 Concentrated RMPD113 Prediluted
<b>Clone:</b>	OCT4/6847R
<b>Immunogen:</b>	Rabbit injected with synthetic peptide of human OCT-3/4 origin
<b>Isotype:</b>	IgG Kappa
<b>Positive Control:</b>	Seminoma
<b>Cellular Localization:</b>	Nuclear

OCT-3/4 (also known as POU5F1) is a transcription factor that has been recognized as fundamental in the maintenance of pluripotency in embryonic stem cells and primordial germ cells. It has been proposed as a useful marker for germ cell tumors (GCT) that exhibit features of pluripotentiality (seminoma/dysgerminoma, germinoma and embryonal carcinoma). OCT-3/4 immunostaining has been shown to be sensitive and specific for GCT, whether in primary gonadal or extragonadal sites or in metastatic lesions.

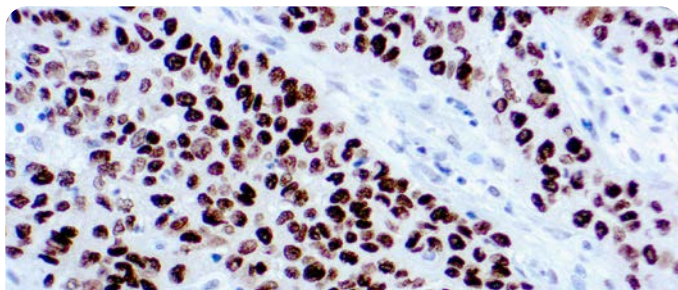


Formalin fixed paraffin embedded HPV and cervical cancer stained with p16.

**p16**  **IVD**

<b>Catalog No.:</b>	Mob575 Concentrated PDM575 Prediluted
<b>Clone:</b>	JC2
<b>Immunogen:</b>	Purified recombinant prokaryotic full length human P16 INK4 protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Cervical carcinoma
<b>Cellular Localization:</b>	Nuclear and cytoplasmic

P16 is a mitotic inhibitor protein. It competes with D-type cyclins to bind to cdk4 and cdk6. It acts as tumor suppressor and inhibits the progression of cells through the G1 phase of the cell cycle.



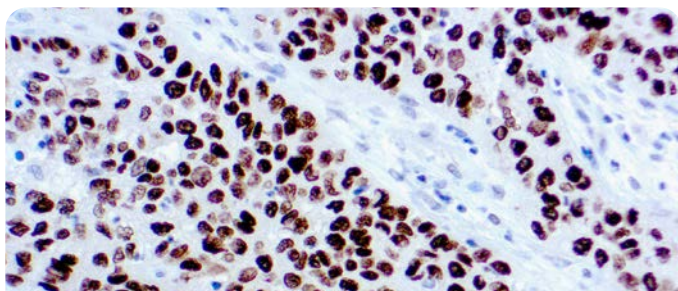
Formalin fixed paraffin embedded human colon carcinoma stained with p27Kip1 antibody.

**p27Kip1**



<b>Catalog No.:</b>	Mob281 Concentrated PDM245 Prediluted
<b>Clone:</b>	DCS-72.F6
<b>Immunogen:</b>	BALB/C mice were injected with mouse recombinant p27 protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Colon carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to a protein of 27 kDa known as p27Kip1 a cell cycle regulatory mitotic inhibitor. This antibody recognizes an epitope between amino acids 83-204 of p27. This antibody does not show any cross-reactivity with other related mitotic inhibitors.



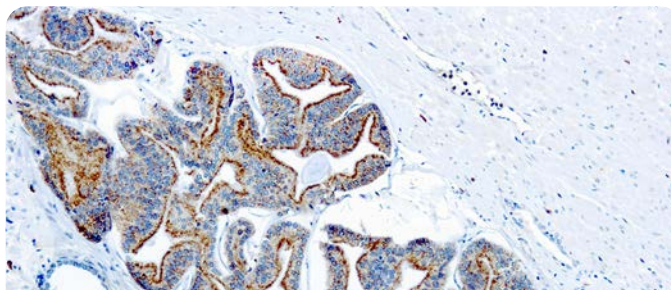
Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with p40 antibody.

**p40**



<b>Catalog No.:</b>	RP163 Concentrated PDR055 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic peptide corresponding to amino acids 5-17 of human p40.
<b>Positive Control:</b>	Prostate
<b>Cellular Localization:</b>	Nuclear

p40 is a relatively unknown antibody that recognizes ΔNp63-a p63 isoform suggested to be highly specific for squamous/basal cells. In a recent study, p40 is equivalent to p63 in sensitivity for squamous cell carcinoma, but it is markedly superior to p63 in specificity<sup>1</sup>, which eliminates a potential pitfall of misinterpreting a p63-positive adenocarcinoma or unsuspected lymphoma as squamous cell carcinoma. These findings strongly support the routine use of p40 in place of p63 for the diagnosis of pulmonary squamous cell carcinoma.



Formalin fixed paraffin embedded prostate carcinoma stained with p504S/α-Methylacyl-CoA Racemase (AMACR) antibody.

**p504S/α-Methylacyl-CoA Racemase (AMACR)**



<b>Catalog No.:</b>	RP134, RP134R - Concentrated PDR046, PDR046R - Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	A synthetic human AMACR peptide.
<b>Positive Control:</b>	Prostate carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

P504S has been recently described as a prostate cancer-specific gene that encodes a protein involved in the β-oxidation of branched chain fatty acids. Expression of protein is found in prostatic adenocarcinoma but not in benign prostatic tissue. It stains premalignant lesions of prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. can be used as a positive marker for PIN.



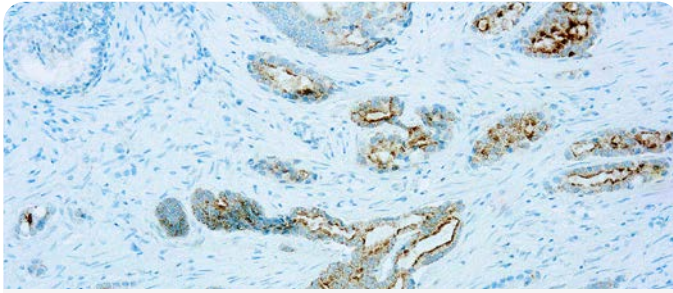
Formalin fixed paraffin embedded human Prostate stained with p63/p504s Cocktail.

**p63/p504s Cocktail**



<b>Catalog No.:</b>	PDRMP001 Concentrated PDRMP001R Concentrated
<b>Clone:</b>	DBR 16.1/Polyclonal
<b>Immunogen:</b>	Recombinant human p63 protein fragment + Synthetic human AMACR peptide
<b>Isotype:</b>	IgG/N/A
<b>Positive Control:</b>	Prostate
<b>Cellular Localization:</b>	Nuclear and Cytoplasmic

p63 is a homolog of the tumor suppressor p53. p63 is selectively expressed by normal prostate basal cells and useful in the differential diagnosis of benign prostatic lesions and prostatic carcinoma. The expression of p504S protein is found in prostatic adenocarcinoma. It stains premalignant lesions of prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. P504S can be used as a positive marker for PIN.



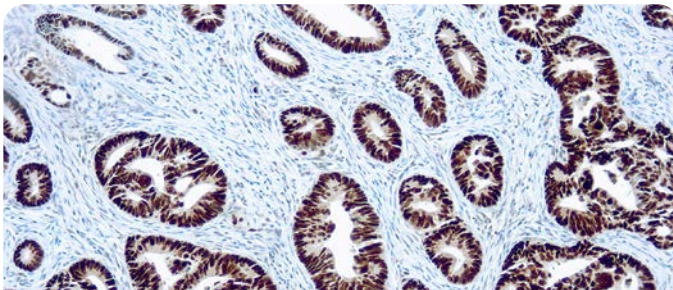
Formalin fixed paraffin embedded human prostate carcinoma stained with .

### Alpha-Methylacyl-CoA Racemase (AMACR)



<b>Catalog No.:</b>	RMAB078 Concentrated RMPD078 Prediluted
<b>Clone:</b>	13H4
<b>Immunogen:</b>	Human AMACR (P504S) polypeptide
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Prostate carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

P504S (AMACR) is an essential enzyme in the  $\beta$ -oxidation of branched-chain fatty acids. Recently, P504S was identified through cDNA library subtraction and microarrays in malignant prostate tissues. The expression of P504S is also detected in two premalignant lesions of the prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. Using P504S as a positive marker along with basal cell staining (34  $\beta$ E12 or P63) as a negative marker could help to confirm the diagnosis of small focus of prostate carcinoma on needle biopsy.



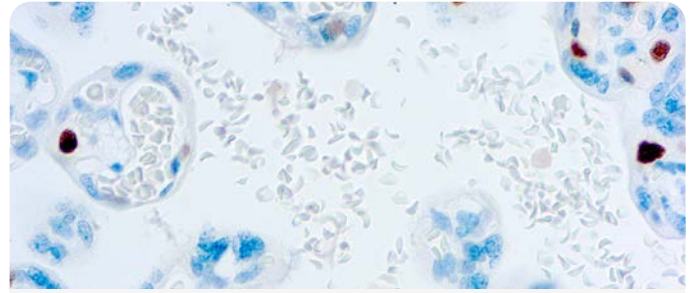
Formalin fixed paraffin embedded colon carcinoma stained with p53 antibody.

### p53



<b>Catalog No.:</b>	Mob082 Concentrated PDM013 Prediluted
<b>Clone:</b>	DO-7
<b>Immunogen:</b>	Recombinant human wild type P53 protein expressed in E. coli
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with wild as well as mutant types of P53 protein. It recognizes an epitope in the N-terminus of p53 protein, known to reside between amino acids 35 to 45. This antibody can be demonstrated in 22-76% of the colon, stomach, bladder, breast, lung and testes cancers.



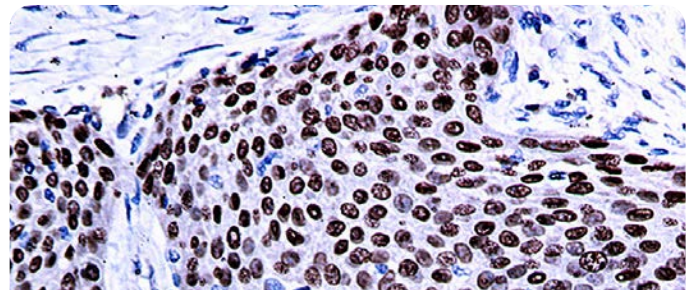
Formalin fixed paraffin embedded colon carcinoma stained with p57Kip2 antibody.

### p57Kip2



<b>Catalog No.:</b>	Mob291 Concentrated PDM205 Prediluted
<b>Clone:</b>	57P06
<b>Immunogen:</b>	BALB/C mice were injected with mouse recombinant p57Kip2protein.
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Colon carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to a protein of 57 kDa known as p57Kip2 a cell cycle regulatory mitotic inhibitor. This antibody does not cross-react with p27Kip1. p57Kip2 is a potent tight-binding inhibitor of several G1 cyclin complexes and a negative regulator of cell proliferation.



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with p63 antibody.

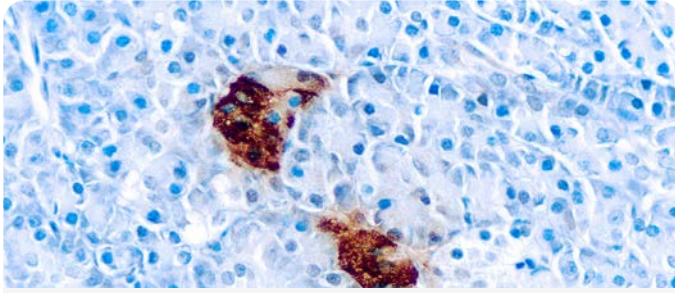
### p63



<b>Catalog No.:</b>	RMAB086,RMAB086R-Concentrated RMPD086,RMPD086R Prediluted
<b>Clone:</b>	DBR16.1
<b>Immunogen:</b>	Recombinant human p63 protein fragment.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Prostate Ca, Tonsil, Breast
<b>Cellular Localization:</b>	Nuclear

p63 is a homolog of the tumor suppressor p53, it is identified in basal cells in the epithelial layers of a variety of tissues, including epidermis, cervix, urothelium, breast and prostate. p63 has also been shown to be a sensitive marker for lung squamous cell carcinomas (SqCC), with a sensitivity of ~90%. Specificity for lung SqCC, vs. lung adenocarcinoma (LADC), is approximately 80. In breast tissue, p63 has been identified in myoepithelial cells of normal ducts.





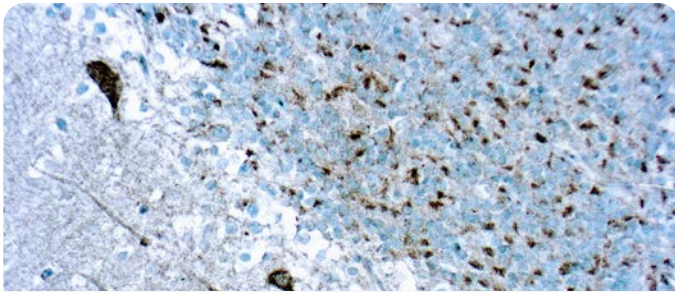
Formalin fixed paraffin embedded human pancreas stained with Pancreatic Polypeptide antibody.

**Pancreatic Polypeptide**



<b>Catalog No.:</b>	RP030 Concentrated
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Synthetic human pancreatic polypeptide conjugated to keyhole limpet hemocyanin.
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with pancreatic polypeptide. It stains the periphery of islets, exocrine pancreatic parenchyma and the epithelium of small and medium sized ducts and acinar cells.



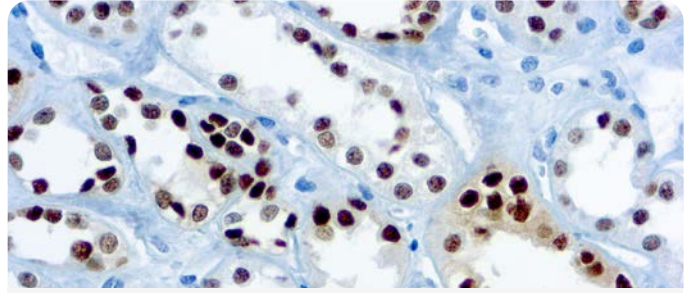
Formalin fixed paraffin embedded human Cerebellum stained with Pan-TRK.

**Pan-TRK**



<b>Catalog No.:</b>	RP176 Concentrated PDR176 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Peptide-KLH conjugate with human Trk A (777-796aa).
<b>Positive Control:</b>	Cerebral cortex tissue
<b>Cellular Localization:</b>	Cytoplasm

Neurotrophic tyrosine kinase receptor (NTRK) is a family of 3 proto-oncogenes including NTRK1, NTRK2, and NTRK3 which encode Trk A, Trk B, and Trk C proteins, respectively. In various cancers, oncogenic fusions involving the kinase domain of NTRK1, 2, or 3 are present. Pan-Trk IHC is a time and tissue-efficient screen for NTRK fusions, particularly in driver-negative advanced malignancies and potential cases of secretory carcinoma and congenital fibrosarcoma. Pan-Trk IHC can help determine whether translation occurs for novel NTRK rearrangements.



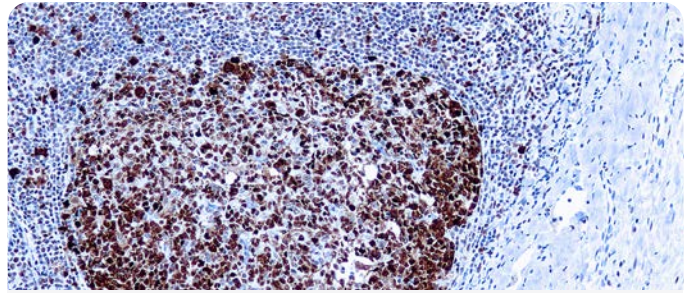
Formalin fixed paraffin embedded renal cell carcinoma stained with Pax-8 antibody.

**PAX-8**



<b>Catalog No.:</b>	PDM180 Prediluted
<b>Clone:</b>	4H7B3
<b>Immunogen:</b>	ag0306
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Normal kidney, renal cell, or serous ovarian carcinomas
<b>Cellular Localization:</b>	Nuclear

PAX-8 is expressed in a high percentage of renal cell carcinomas and ovarian cancers. This mouse monoclonal PAX-8 antibody has been designed to target restricted epitopes, and exhibits higher specificity and provides sharper staining than the PAX-8 rabbit polyclonal antibody. The expression of the mouse monoclonal PAX-8 targets antigens found in normal kidney, thyroid and cervix, but not normal ovary. PAX-8 stains nuclei exclusively and performs well in formalin-fixed paraffin-embedded tissues.



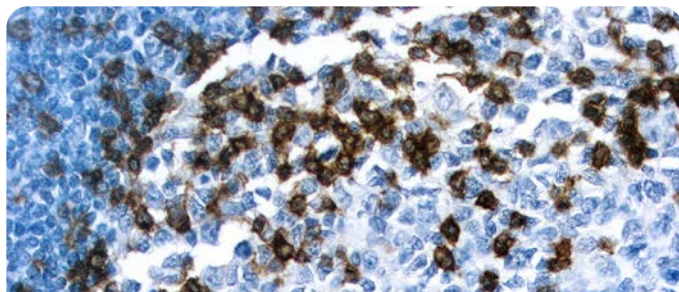
Formalin fixed paraffin embedded human tonsil stained with PCNA antibody.

**PCNA (Proliferating Cell Nuclear Antigen)**



<b>Catalog No.:</b>	Mob083 Concentrated PDM014 Prediluted
<b>Clone:</b>	PC10
<b>Immunogen:</b>	Rat PCNA made in the protein A expression vector pR1T2T.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

PCNA is essential for cellular DNA synthesis. This antibody reacts with proliferating cells in a wide range of normal tissues. The significance of PCNA immunoreactivity in tumors is not fully established. However, in non-Hodgkin lymphoma a linear relation between Ki-67 and PCNA staining has been demonstrated.

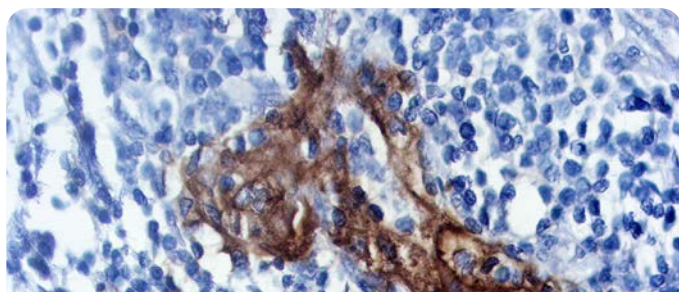


Formalin fixed paraffin embedded human tonsil stained with PD-1.

**PD-1**

<b>Catalog No.:</b>	Mob573 Concentrated PDM573 Prediluted
<b>Clone:</b>	EH33
<b>Immunogen:</b>	Recombinant protein fragment corresponding to the extracellular domain of human PD-1 (as an Ig fusion protein).
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Membrane

PD-1 antibody aids in pathways that can protect tumors from cytotoxic T cells, ultimately inhibiting the antitumor immune response by deactivating cytotoxic T cells in the tumor microenvironment and preventing priming and activation of new T cells in the lymph nodes and subsequent recruitment to the tumor. The PD-1 antibody has recently been used as a tool for predictive biomarkers in the diagnosis of various cancers. The PD-L1/B7.1 and PD-L1/PD-1 pathway, once deactivated, allow T cells to remain inhibited.

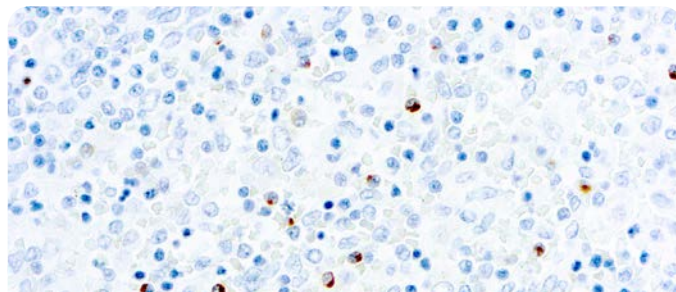


Formalin fixed paraffin embedded squamous lung carcinoma stained with PD-L1.

**PD-L1**

<b>Catalog No.:</b>	Mob572 Concentrated PDM572 Prediluted
<b>Clone:</b>	405-9A11
<b>Immunogen:</b>	Last 19 amino acids at the carboxy-terminus of the human membrane-bound PD-L1 polypeptide, coupled to KLH.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Lung squamous cell carcinoma
<b>Cellular Localization:</b>	Membrane

The programmed death receptor 1 (PD-1) protein is a cell surface receptor on certain lymphocytes that helps to down-regulate immune responses. Precision therapies targeting the PD-1/PD-L1 pathway have the potential to improve response and thereby offer a novel treatment avenue to some patients with cancer.

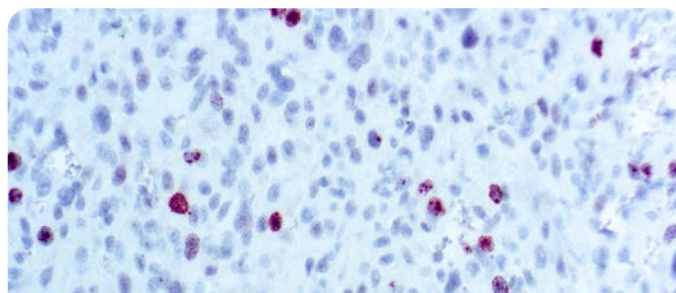


Formalin fixed paraffin embedded human spleen stained with Perforin.

**Perforin**

<b>Catalog No.:</b>	Mob555 Concentrated PDM555 Prediluted
<b>Clone:</b>	5B10
<b>Immunogen:</b>	Recombinant protein corresponding to an external region of the C-terminus of the perforin molecule.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Spleen
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a 70 kDa protein, which is a potent cytolytic pore-forming protein. Perforin is a specific marker of functionally active cytotoxic T-lymphocytes and natural killer cells. Perforin mediates cytolysis of target cells by membrane damage and apoptosis.

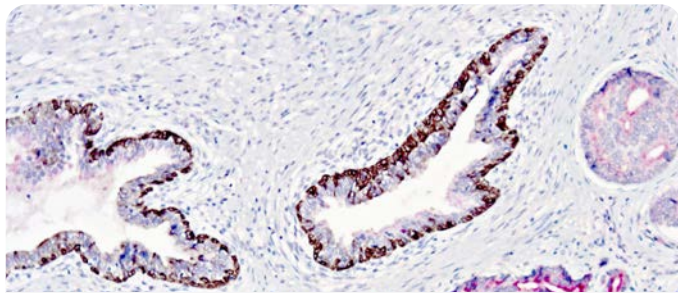


Formalin fixed paraffin embedded Melanoma stained with pHH3.

**pHH3**

<b>Catalog No.:</b>	RP168 Concentrated PDR168 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Phosphohistone protein isolated from human tissue.
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Nuclear (mitotic figure)

pHH3 can serve as a mitotic marker to separate mitotic figures from apoptotic bodies and karyorrhectic debris, which may be a very useful tool in diagnosis of tumor grades, especially in CNS, skin, gyn., soft tissue, and GIST.



Formalin fixed paraffin embedded human prostate carcinoma stained with Prostate Cocktail.

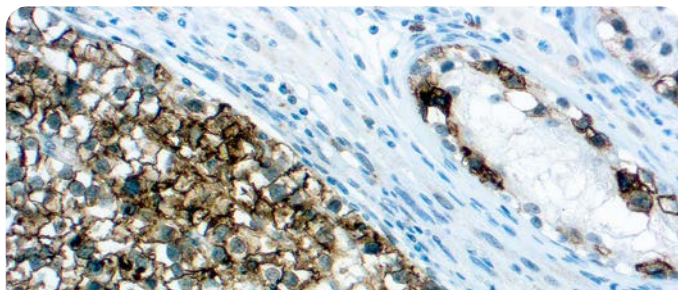
**PIN5 Cocktail**



Rabbit anti-p40 + Mouse anti-Cytokeratin (HMW) and Rabbit anti- (AMACR)

<b>Catalog No.:</b>	PDR057 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Polyclonal rabbit antibody to human p40
<b>Positive Control:</b>	Prostatic intraepithelial neoplasia (PIN).
<b>Cellular Localization:</b>	p40: Nuclear Cytokeratin (HMW): Cytoplasmic (AMACR): Cytoplasmic

The combined detection of p504S, p40 and high molecular weight cytokeratin markers has been shown to be useful for distinguishing benign conditions mimicking cancer from prostate carcinomas. In particular, these markers have been shown to be relevant in diagnosing the premalignant condition, prostatic intraepithelial neoplasia (PIN).



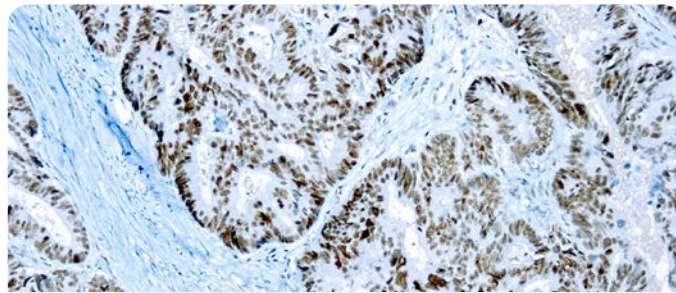
Formalin fixed paraffin embedded Seminoma stained with Placental Alkaline Phosphatase (PLAP) (SP15).

**Placental Alkaline Phosphatase (PLAP)**



<b>Catalog No.:</b>	RMAB017 Concentrated RMPD017 Prediluted
<b>Clone:</b>	SP15
<b>Immunogen:</b>	Recombinant protein encoding human placental alkaline phosphatase (PLAP).
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Placenta
<b>Cellular Localization:</b>	Cytoplasmic

The antibody reacts with membrane-bound isoenzyme (Regan and Nagao type) of placental alkaline phosphatase (PLAP) in the placenta during the 3rd-trimester gestation. It is useful in the identification of testicular germ cell tumors. PLAP-positive somatic cell tumors uniformly express epithelial membrane antigen (EMA).



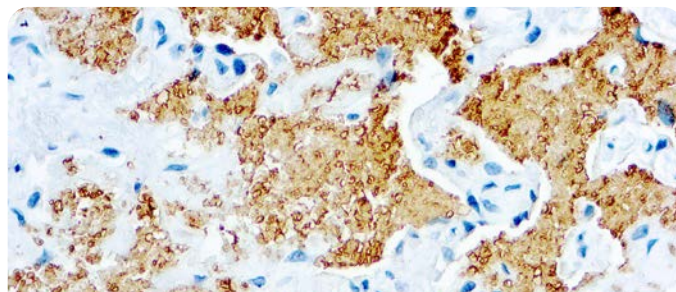
Formalin fixed paraffin embedded colon adenocarcinoma stained with PMS2.

**PMS2 (Mismatch Repair Protein)**



<b>Catalog No.:</b>	PDM171 Prediluted
<b>Clone:</b>	A16-4
<b>Immunogen:</b>	Recombinant human PMS2 (C-terminus).
<b>Isotype:</b>	IgG1, κ
<b>Positive Control:</b>	Colon carcinoma, tonsil
<b>Cellular Localization:</b>	Nuclear

Postmeiotic segregation increased 2 or PMS2 was originally discovered in *S. cerevisiae* and is part of the mismatch repair system. It resides on 7p22.2 and its gene product partners with MLH1 to help detect mismatches in DNA. Mutations in PMS2 have been reported in about two percent of families with Lynch syndrome (hereditary nonpolyposis colorectal cancer).



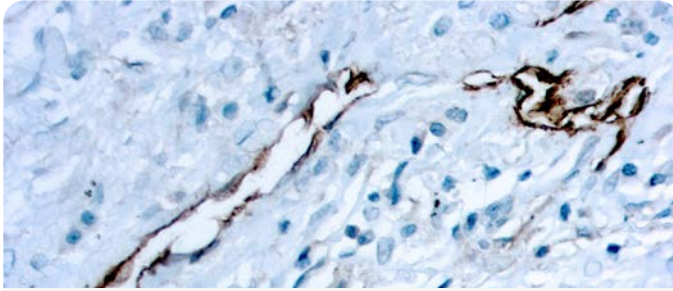
Formalin fixed paraffin embedded human infected tissue stained with Pneumocystis carinii antibody.

**Pneumocystis carinii**



<b>Catalog No.:</b>	Mob091, Mob091R - Concentrated PDM584, PDM584R - Prediluted
<b>Clone:</b>	3F6
<b>Immunogen:</b>	BALB/C mice were injected with <i>P. carinii</i> cysts isolated from human lung.
<b>Isotype:</b>	IgM, kappa
<b>Positive Control:</b>	Infected lung
<b>Cellular Localization:</b>	Alveolar spaces

This antibody reacts with *P. carinii* in the fixed human tissues. The antibody is specific against an 82 kDa parasite specific polypeptide. It does not cross-react with *G. lamblia*, *T. gondii*, *T. cruzi*, *L. tropica*, *E. histolytica*, *C. albicans* and *P. falciparum*.



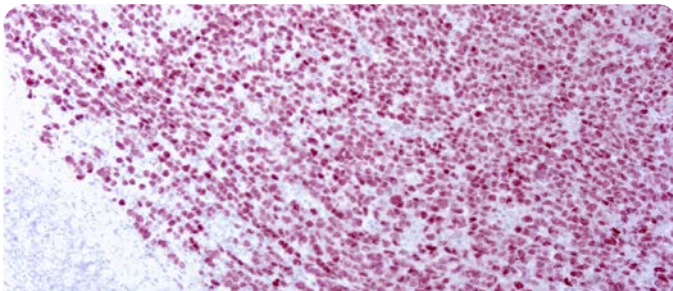
Formalin fixed paraffin embedded human Tonsil stained with Podoplanin/D2-40

### Podoplanin/D2-40



<b>Catalog No.:</b>	Mob558 Concentrated PDM558 Prediluted
<b>Clone:</b>	D2-40
<b>Immunogen:</b>	Dysgerminoma tissue.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Transmembrane and Cytoplasmic

Podoplanin identifies the ~38 kDa O-linked transmembrane sialoglycoprotein podoplanin, which is expressed in the endothelium of lymphatic capillaries, but not in the blood vasculature (1). Besides the expression in lymphatic endothelium, podoplanin is also found in a variety of other tissues, including mesothelial cells, reticular cells, follicular dendritic cells, ovarian and testicular germ cells (2). Results aid in the classification of lymphatic invasion of primary tumors.



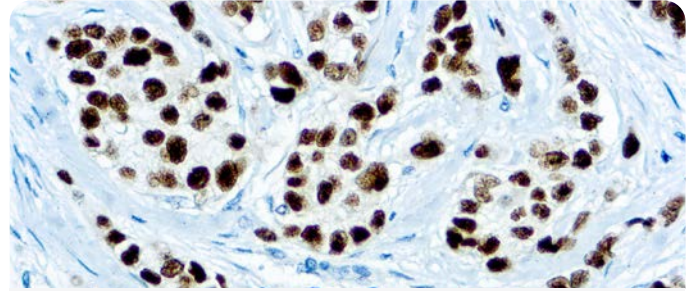
Formalin fixed paraffin embedded human melanoma stained with PRAME

### PRAME



<b>Catalog No.:</b>	RMAB109 Concentrated RMPD109 Prediluted
<b>Clone:</b>	EPR20330
<b>Immunogen:</b>	Recombinant fragment within Human PRAME aa 100 to the C-terminus.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Nucleus/Cell membrane

PRAME (Preferentially expressed Antigen in Melanoma) is a tumor-associated antigen and is a member of the family of cancer testis antigens (CTA). PRAME is expressed in malignant cells, including leukaemias, Hodgkin's lymphoma, breast cancer, and primary and metastatic melanomas. PRAME has low or no expression in normal tissues except for in testis, ovary, placenta, adrenals and endometrium.



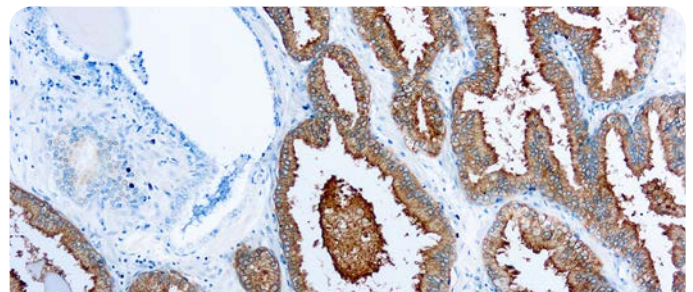
Formalin fixed paraffin embedded breast carcinoma stained with Progesterone Receptor antibody.

### PR (Progesterone Receptor)



<b>Catalog No.:</b>	RMAB002, RMAB002R - Concentrated RMPD002, RMPD002R - Prediluted
<b>Clone:</b>	SP2
<b>Immunogen:</b>	Recombinant protein encoding human progesterone receptor 412-526 aa.
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Breast Carcinoma
<b>Cellular Localization:</b>	Nuclear

The progesterone receptor (PgR) is an estrogen-regulated protein. It has been proposed that expression of PgR indicates a responsive estrogen receptor (ER) pathway. A number of studies have shown that PgR determination provides supplementary information to ER, both in predicting response to endocrine therapy and estimating survival. PgR has proved superior to ER as a prognostic indicator in some studies.



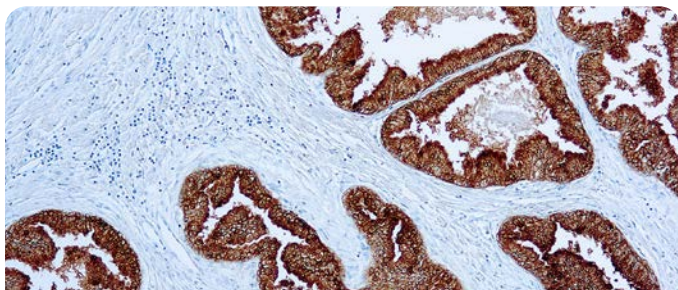
Formalin fixed paraffin embedded human prostate stained with PSA antibody.

### Prostate Specific Antigen (PSA)



<b>Catalog No.:</b>	Mob548R Concentrated PDM548R Prediluted
<b>Clone:</b>	35H9
<b>Immunogen:</b>	Prokaryotic recombinant protein corresponding to a portion of the N-terminus of the prostate specific antigen molecule.
<b>Isotype:</b>	IgG1.
<b>Positive Control:</b>	Prostate carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with human prostate specific antigen.

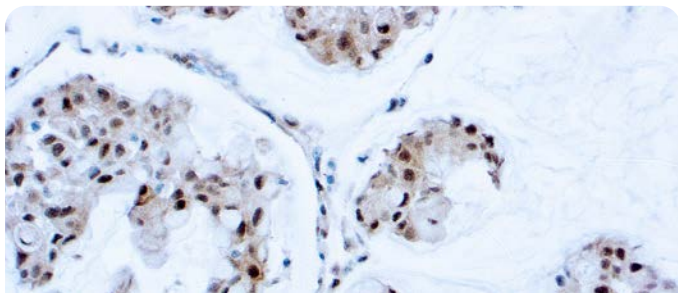


Formalin fixed paraffin embedded human Prostate carcinoma stained with PSAP

**Prostatic Acid Phosphatase (PSAP)**  

<b>Catalog No.:</b>	Mob085 Concentrated PDM037 Prediluted
<b>Clone:</b>	PASE/4LJ
<b>Immunogen:</b>	BALB/C mice were injected with purified prostatic acid phosphatase from human seminal plasma.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Prostate carcinoma
<b>Cellular Localization:</b>	Cytoplasm

This antibody is specific to human prostatic acid phosphatase. It reacts with the glandular epithelium of normal and hyperplastic prostate and with prostate adenocarcinoma.

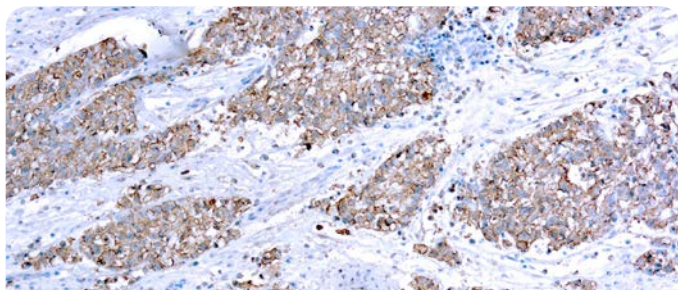


Formalin fixed paraffin embedded human breast carcinoma stained with PTEN antibody.

**PTEN**  

<b>Catalog No.:</b>	Mob574 Concentrated PDM574 Prediluted
<b>Clone:</b>	6H2.1
<b>Immunogen:</b>	C-terminal 100 amino acids of PTEN.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Breast, Renal cell and Prostate carcinomas
<b>Cellular Localization:</b>	Nuclear and Cytoplasmic

PTEN gene is a tumor suppressor gene that maps to chromosome 10q23. PTEN, a novel tumor suppressor, functions as a regulator of both cell cycle progression and apoptosis. Potentially, mutation and deletion of PTEN gene may result in a new signal transduction pathway related to human malignant tumors. Studies have demonstrated a reduction of PTEN expression in advanced breast cancers.

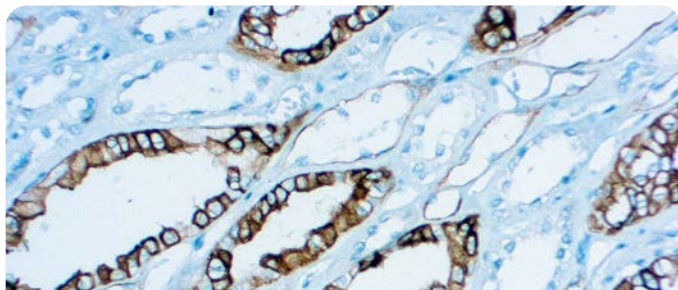


Formalin fixed paraffin embedded human testis stained with Rad51.

**Rad51**   

<b>Catalog No.:</b>	Mob324, Mob324R - Concentrated
<b>Clone:</b>	51RAD01
<b>Immunogen:</b>	BALB/C mice were injected with recombinant Rad51 protein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Testis
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to a 37-43 kDa protein known as Rad51. Rad51 is similar to RecA. Rad51 promotes homologous pairing and strand exchange within a regular nucleoprotein filament. Rad51 has been suggested to be involved in homologous recombination and in cell proliferation regulation.

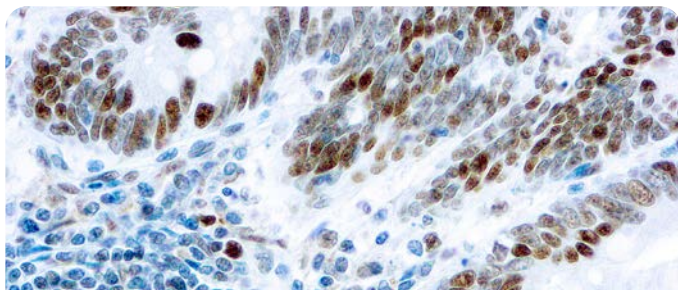


Formalin fixed paraffin embedded human Normal kidney or renal cell carcinoma stained with RCC

**Renal Cell Carcinoma (RCC)**  

<b>Catalog No.:</b>	Mob465 Concentrated PDM169 Prediluted
<b>Clone:</b>	PN-15
<b>Immunogen:</b>	BALB/C mice were injected with human renal cortical tissue homogenate.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Normal kidney or renal cell carcinoma
<b>Cellular Localization:</b>	Membrane

This antibody recognizes a 200 kD glycoprotein (gp200) localized in the brush border of the proximal renal tubules and the luminal surface of Bowman's capsule. gp200 was expressed by 93% of primary and 84% of metastatic renal carcinomas. Gp200 glycoprotein is also localized in the breast lobules and ducts, parathyroid glands and epididymis.

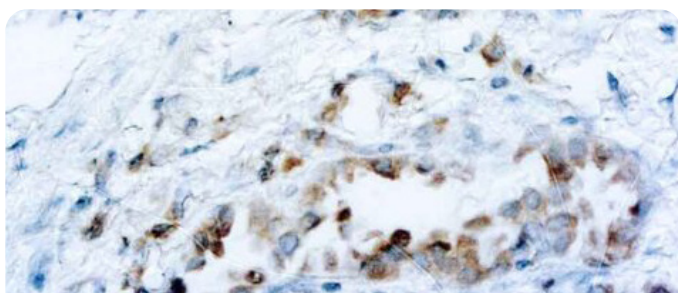


Formalin fixed paraffin embedded human colon carcinoma stained with Retinoblastoma antibody.

### Retinoblastoma Gene Protein (Rb) IVD

<b>Catalog No.:</b>	Mob220 Concentrated PDM111 Prediluted
<b>Clone:</b>	1F8
<b>Immunogen:</b>	Recombinant human Rb protein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Colon carcinoma
<b>Cellular Localization:</b>	Nuclear

This antibody recognizes human retinoblastoma gene protein. Rb gene, a prototype of tumor suppressor genes, has been associated with development and/or progression of bladder cancer as well as sarcoma and small cell lung cancer. Functional Rb gene loss has been reported to occur in bladder cancer and osteosarcoma. A significantly poorer tumor-free survival rate was noted for those patients who had a tumor with an altered Rb protein with or without vascular invasion.

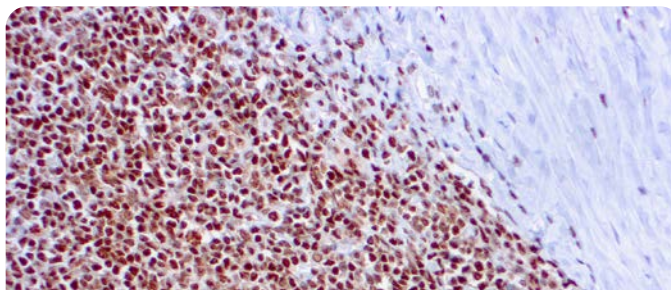


Formalin fixed paraffin embedded human Lung carcinoma stained with ROS1

### ROS1 IVD

<b>Catalog No.:</b>	RMPD108 Prediluted
<b>Clone:</b>	EPMGHR2
<b>Immunogen:</b>	Synthetic peptide within Human ROS1 aa 2050-2150. The exact sequence is proprietary
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Lung carcinoma
<b>Cellular Localization:</b>	Diffuse Cytoplasmic

ROS1 rearrangements occur infrequently in lung ACA, however given the frequency of lung cancer in the population, ROS1-rearranged tumors represent a significant number of cancer patients. ROS1 gene rearrangements are reported in 1–2% of lung adenocarcinomas (ACA) and are associated with response to the multitargeted tyrosine kinase inhibitor, crizotinib. ROS IHC can be readily incorporated into the diagnostic surgical pathology workup of lung adenocarcinoma, with results confirmed by FISH as needed.

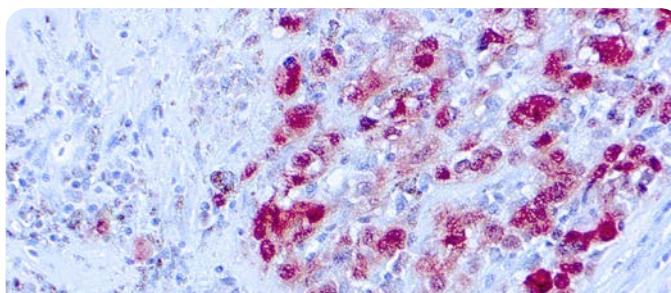


Formalin fixed paraffin embedded human tonsil stained with RPA/p34 antibody.

### RPA/p34 IVD

<b>Catalog No.:</b>	Mob329 Concentrated
<b>Clone:</b>	9H8
<b>Immunogen:</b>	BALB/C mice were injected with purified human RPA protein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Nuclear

This antibody reacts with a 32-34 kDa protein known as replication protein A (RPA). RPA is involved in DNA replication, repair and recombination. Human RPA is a stable heterotrimer of 70 kDa, 32-34 kDa and 11-14 kDa subunits (RPA70, RPA32 and RPA14 respectively). RPA is required for the SV40 large tumor antigen-catalyzed unwinding for SV40 DNA and stimulates DNA polymerase  $\alpha$  and  $\delta$ .

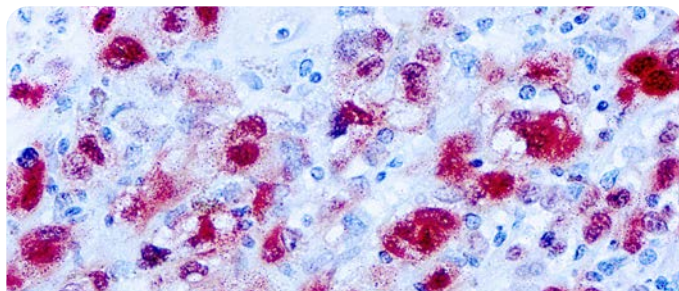


Formalin fixed paraffin embedded human melanoma stained with S-100 antibody.

### S-100 IVD

<b>Catalog No.:</b>	Mob111 Concentrated PDM088 Prediluted
<b>Clone:</b>	SH-B1
<b>Immunogen:</b>	Purified bovine brain S-100 $\beta$ preparation.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific against an epitope located on the  $\beta$  chain (i.e. in S-100a and S-100b) but not on the  $\alpha$  chain of S-100 (i.e. in S-100a and S-100ao). This antibody can be used to localize S-100a and S-100b in various tissue sections.

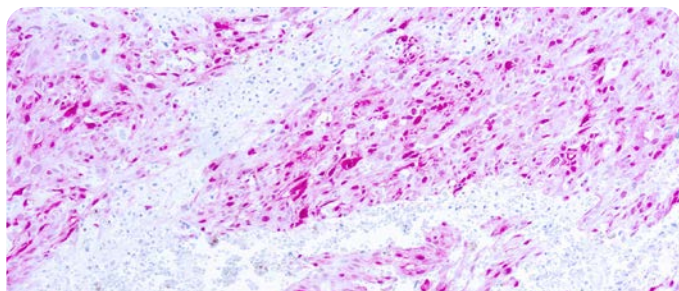


Formalin fixed paraffin embedded human skin stained with S100 antibody.

**S-100**  

<b>Catalog No.:</b>	Mob377 Concentrated PDM194 Prediluted
<b>Clone:</b>	4C4.9
<b>Immunogen:</b>	BALB/C mice were immunized with purified bovine brain S-100 proteins.
<b>Isotype:</b>	IgG2a, Kappa
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody stains with S-100 protein. S-100 belongs to the family of calcium binding proteins such as calmodulin and troponin C. S-100a and S-100b proteins are two members of the S-100 family. S-100a is composed of an  $\alpha$  and  $\beta$  chain whereas S-100b is composed of two  $\beta$  chains. This antibody stains schwannomas, ependymomas, astroglomas, almost all benign and malignant melanomas and their metastases.

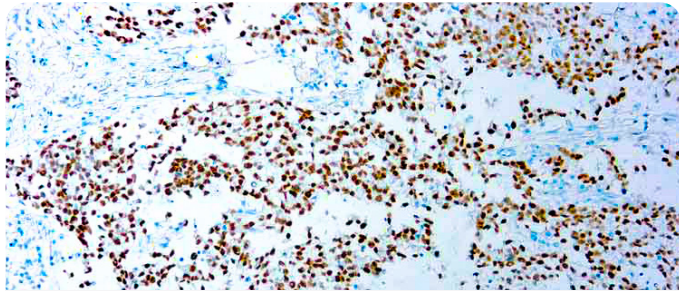


Formalin fixed paraffin embedded human melanoma stained with S-100 antibody.

**S-100**  

<b>Catalog No.:</b>	RP035 Concentrated PDR008 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Affinity purified S-100 protein isolated from cow brain.
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody reacts with cow S-100 protein a and b. It shows strong cross-reactivity with human S-100 a and b. In the brain, it labels glial and ependymal cells. Melanocytes and Langerhans cells of the skin stain positive with this antibody.

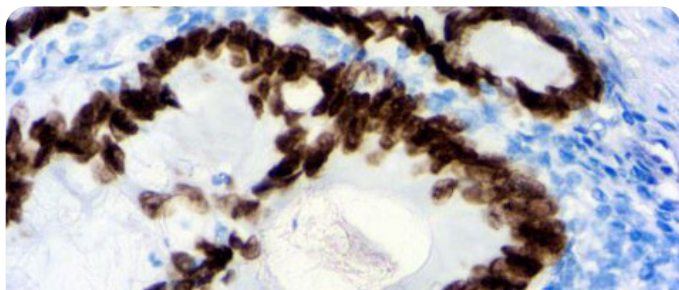


Formalin fixed paraffin embedded human seminoma stained with SALL4

**SALL4**  

<b>Catalog No.:</b>	Mob591 Concentrated PDM591 Prediluted
<b>Clone:</b>	6E3
<b>Immunogen:</b>	SALL4 (partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa)
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Seminoma
<b>Cellular Localization:</b>	Nuclear

Sal-like protein 4 (SALL4) is a zinc-finger transcription factor that serves as a master regulator of embryonic pluripotency and is involved in processes associated with stem cell activities. SALL4 expression in germ cells makes it a useful marker for germ cell tumors such as seminoma, embryonal carcinoma, yolk sac tumors and teratomas. SALL4 expression is also seen in the spermatogonia of normal testis.

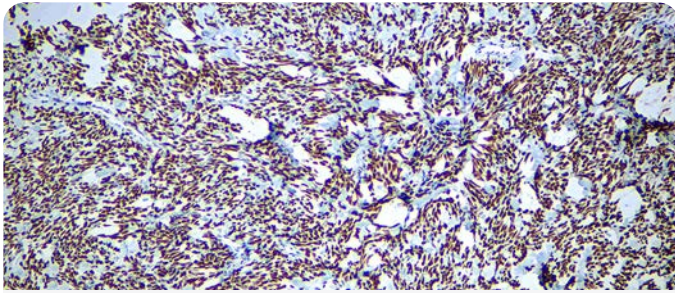


Formalin fixed paraffin embedded human colon carcinoma stained with SATB2

**SATB2**  

<b>Catalog No.:</b>	RMAB112 Concentrated RMPD112 Prediluted
<b>Clone:</b>	EP 281
<b>Immunogen:</b>	Synthetic peptide corresponding to human SATB2
<b>Isotype:</b>	IgG
<b>Positive Control:</b>	Colon Carcinoma
<b>Cellular Localization:</b>	Nuclear

Special AT-rich sequence-binding protein 2 (SATB2) is a recently described marker that functions as a nuclear matrix-associated transcription factor. It has been reported that SATB2, in combination with CK20, could identify almost all colorectal carcinomas, including poorly differentiated colorectal carcinomas.

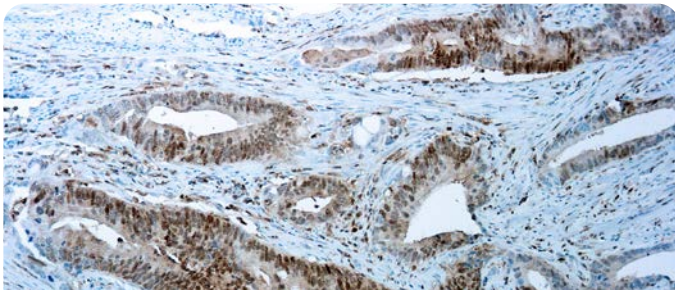


Formalin fixed paraffin embedded human Solitary fibrous tumor stained with STAT6

**STAT6**   

<b>Catalog No.:</b>	Mob605 Concentrated
<b>IVD (Outside Europe):</b>	PDM605 Prediluted
<b>Catalog No.:</b>	Mob605R Concentrated
<b>RUO (Europe):</b>	PDM605R Prediluted
<b>Clone:</b>	D-1
<b>Immunogen:</b>	A synthetic peptide corresponding to amino acids 799-823 at the C-terminus
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Solitary fibrous tumor
<b>Cellular Localization:</b>	Nuclear

Solitary fibrous tumor (SFT) is a fibroblastic neoplasm of variable biologic potential that can arise at a wide range of anatomic sites. Almost all cases of (98%) including conventional, cellular, atypical, and malignant variants showed nuclear expression of STAT6. Staining for STAT6 was usually diffuse: 68% of cases showed reactivity for STAT6 in 75% of tumor cells.

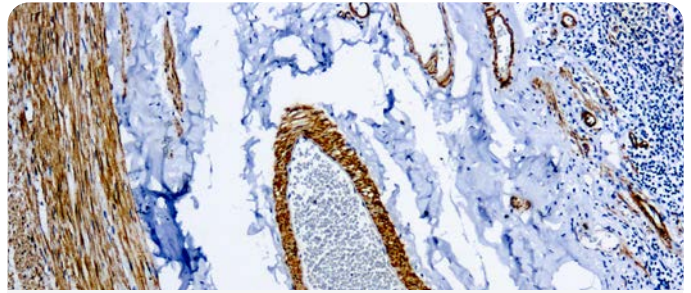


Formalin fixed paraffin embedded human Colon Ca stained with Smad4.

**Smad4**  

<b>Catalog No.:</b>	RP173 Concentrated
	PDR173 Prediluted
<b>Clone:</b>	Rabbit
<b>Immunogen:</b>	Recombinant fragment corresponding to a region within amino acids 322 and 552 of SMAD4
<b>Positive Control:</b>	Colon Ca, Pancreas Ca
<b>Cellular Localization:</b>	Nuclear/ Cytoplasm

Alterations in the SMAD4 gene was primarily discovered in pancreatic cancer (duct adenocarcinoma) but occur in a variety of cancers such as colorectal cancer, gastric cancer, prostate cancer, melanomas, head and neck cancers and many others, though with higher frequencies in gastrointestinal tract cancers. Loss of SMAD4 expression in tumors has also been shown to affect cancer progression and therapy, such as reduced response to adjuvant chemotherapy.

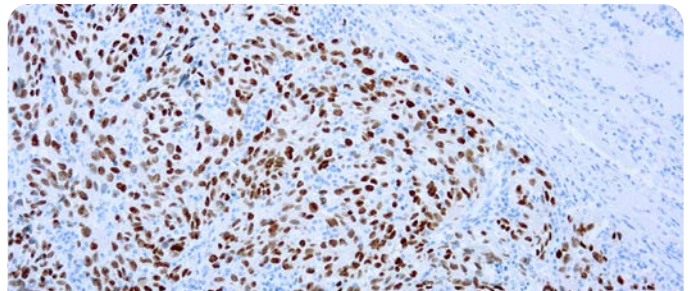


Formalin fixed paraffin embedded human appendix stained with Smooth Muscle Myosin antibody.

**Smooth Muscle Myosin**  

<b>Catalog No.:</b>	Mob467 Concentrated
	PDM175 Prediluted
<b>Clone:</b>	SMMS-1
<b>Immunogen:</b>	Human uterus smooth muscle extract.
<b>Isotype:</b>	IgG1, Kappa
<b>Positive Control:</b>	Colon, appendix
<b>Cellular Localization:</b>	Cytoplasmic

Monoclonal anti-smooth muscle myosin reacts with myosin heavy chain polypeptides of 200 and 204 kDa. It does not react with skeletal, cardiac, or non-muscle myosin. In immunohistochemistry it stains vascular and visceral smooth muscle cells and cells that have smooth muscle-like characteristics.



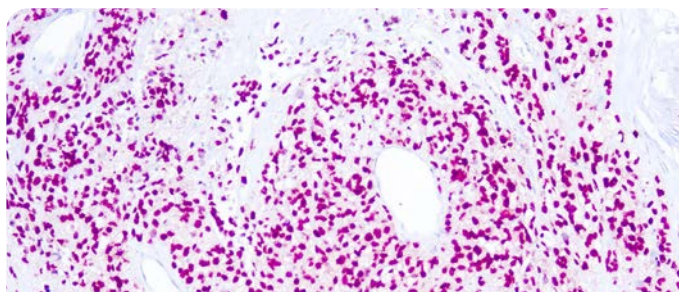
Formalin fixed paraffin embedded human melanoma stained with SOX-10 antibody.

**SOX-10**  

<b>Catalog No.:</b>	Mob565 Concentrated
	PDM565 Prediluted
<b>Clone:</b>	20B7
<b>Immunogen:</b>	Human SOX-10 recombinant protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Nuclear

SOX-10 is also an important marker in malignant tumors such as melanoma, breast carcinoma, gliomas, and benign tumors such as schwannomas. SOX-10 is considered as a very reliable marker for recognizing residual desmoplastic melanomas. In normal tissues, it is expressed in Schwann cells, melanocytes and myoepithelial cells of salivary, bronchial and mammary glands. SOX-10 expression is also observed in mast cells.



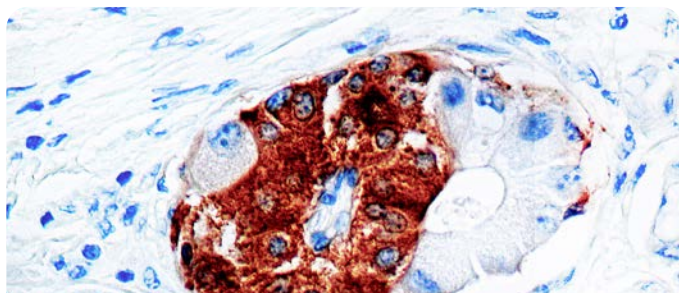


Formalin fixed paraffin embedded human melanoma stained with SOX-10.

**SOX-10**  

<b>Catalog No.:</b>	RMAB077 Concentrated RMPD077 Prediluted
<b>Clone:</b>	EP268
<b>Immunogen:</b>	Recombinant fragment corresponding to residues in human SOX-10 protein.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Nuclear

SOX-10 is widely expressed in normal human tissues including melanocytes and breast tissue. SOX-10 is also an important marker in malignant tumors such as melanoma, breast carcinomas of basal-like triple-negative type, gliomas, and benign tumors such as schwannomas. The majority of oligodendrogliomas and a large percentage of astrocytomas and poorly differentiated glioblastomas have also been shown to express SOX10.

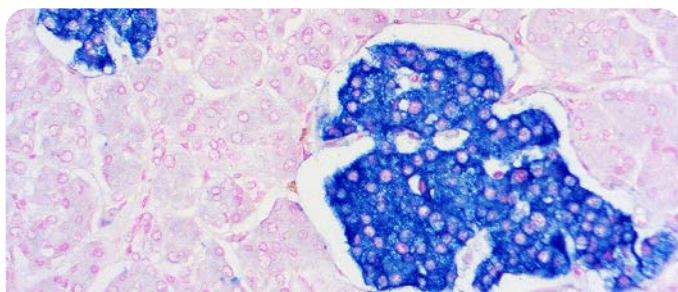


Formalin fixed paraffin embedded human pancreas stained with Synaptophysin antibody.

**Synaptophysin**  

<b>Catalog No.:</b>	Mob399 Concentrated PDM592 Prediluted
<b>Clone:</b>	SYPO2
<b>Immunogen:</b>	BALB/C mice were injected with a synthetic peptide encoding a region near the C-terminal end of the synaptophysin protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a 38 kDa protein. Synaptophysin is an glycoprotein occurring in presynaptic vesicles of neurons in the brain, spinal cord, retina, vesicles of adrenal medulla and in neuromuscular junctions. This antibody reacts with neuroendocrine neoplasms of neural as well as epithelial types.

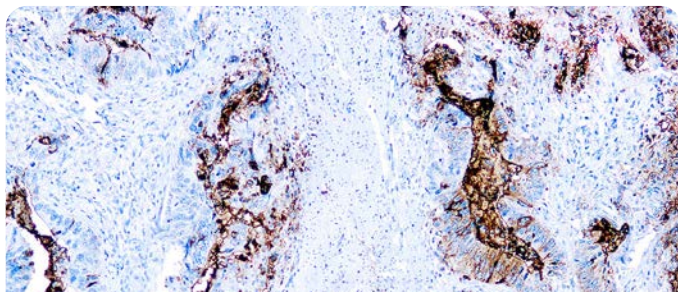


Formalin fixed paraffin embedded human pancreas stained with Synaptophysin antibody.

**Synaptophysin**  

<b>Catalog No.:</b>	RMAB018 Concentrated RMPD018 Prediluted
<b>Clone:</b>	SP11
<b>Immunogen:</b>	A synthetic peptide of human synaptophysin.
<b>Isotype:</b>	Rabbit IgG
<b>Positive Control:</b>	Pancreas
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes a protein of 38kDa, identified as synaptophysin. It labels normal neuroendocrine cells of human adrenal medulla, carotid body, skin, pituitary gland, thyroid, lung, pancreas, gastrointestinal mucosa, Paneth's cells in the gastrointestinal tract and gastric parietal cells. Neurons in the brain, spinal cord, and retina are also labeled. In combination with anti-chromogranin A and anti-NSE, anti-synaptophysin is very useful in the identification of normal neuroendocrine cells and neuroendocrine neoplasms.

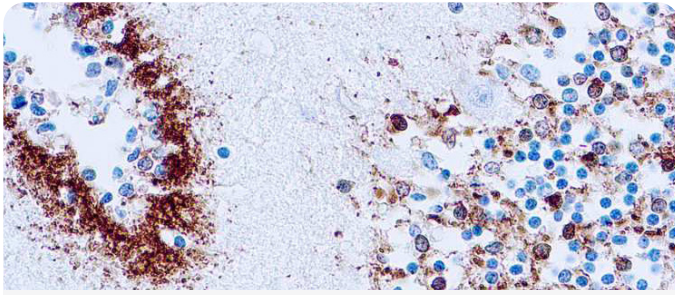


Formalin fixed paraffin embedded colon carcinoma stained with TAG-72 antibody.

**TAG-72/CA 72-4**  

<b>Catalog No.:</b>	Mob288 Concentrated PDM100 Prediluted
<b>Clone:</b>	B72.3
<b>Immunogen:</b>	BALB/C mice were injected with membrane enriched fraction of a human breast carcinoma liver metastasis.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic, cell surface

This antibody is specific to an oncofetal antigen of >1,000 kDa known as tumor associated glycoprotein (TAG-72) or CA 72-4. This antibody defines the mucin carried sialylated-Tn antigen. This antibody stains the majority of human adenocarcinomas including colorectal, pancreatic, gastric, ovarian, endometrial, mammary and non-small cell lung cancer.

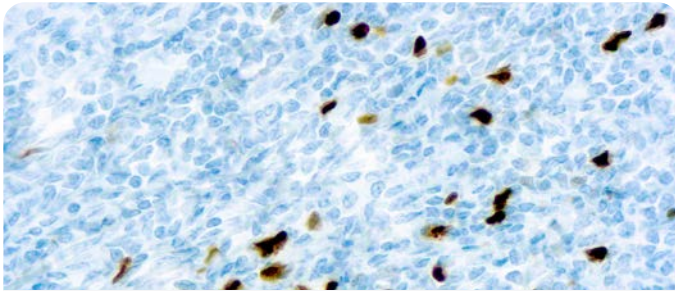


Formalin fixed paraffin embedded Alzheimer brain stained with Tau.

**Tau (Neurofibrillary Tangles Marker)**

<b>Catalog No.:</b>	Mob472 Concentrated
<b>Clone:</b>	Tau46
<b>Immunogen:</b>	BALB/C mice were injected with purified bovine Tau
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Alzheimer brain
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 45-60 kD proteins identified as tau proteins. This antibody does not cross react with tubulin or other microtubule associated proteins. This antibody recognizes a phosphorylation-independent epitope in amino acids 404-441 (human). Tau antibody stains human neurofibrillary tangles, neutrophil threads and neurotic plaques associated with Alzheimer's disease.

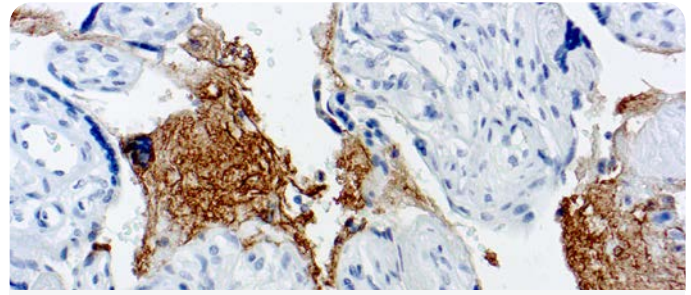


Formalin fixed paraffin embedded human tonsil stained with Tdt antibody.

**Tdt****(Terminal Deoxynucleotidyl Transferase)**

<b>Catalog No.:</b>	Mob545 Concentrated PDM096 Prediluted
<b>Clone:</b>	SEN28
<b>Immunogen:</b>	BALB/C mice were injected with Tdt.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Thymus
<b>Cellular Localization:</b>	Nuclear

This antibody stains a 60kDa peptide in human lymphoblasts. Tdt is present in the cells during immunoglobulin gene rearrangement and plays an important role in lymphocyte maturation. Tdt marks both T and B immature lymphocytes normally found in thymus and bone marrow.

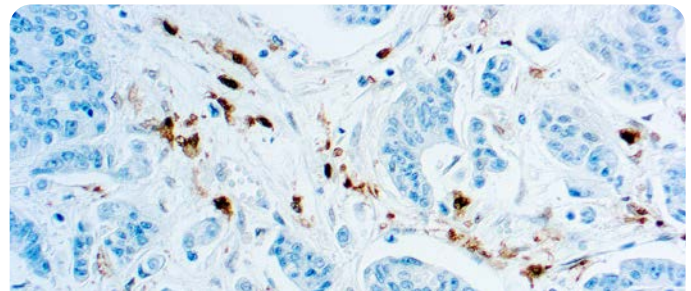


Formalin fixed paraffin embedded human placenta stained with Thrombospondin antibody.

**Thrombospondin (TSP)**

<b>Catalog No.:</b>	Mob315 Concentrated
<b>Clone:</b>	A6.1
<b>Immunogen:</b>	BALB/C mice were injected with reduced and alkylated purified human TSP (fully denatured) from the supernatant of thrombin-activated platelets.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Tonsil
<b>Cellular Localization:</b>	Secretory granules, Golgi complex, endoplasmic reticulum

This antibody is specific to 450 kDa (non-reduced) and 170 to 180 kD (reduced) form of thrombospondin. Thrombospondin is a protein from platelet  $\alpha$  granules. It is secreted at sites of platelet activation and aggregation and is involved in the differentiation of leukocytes, fibroblasts, smooth muscle and endothelial cells.

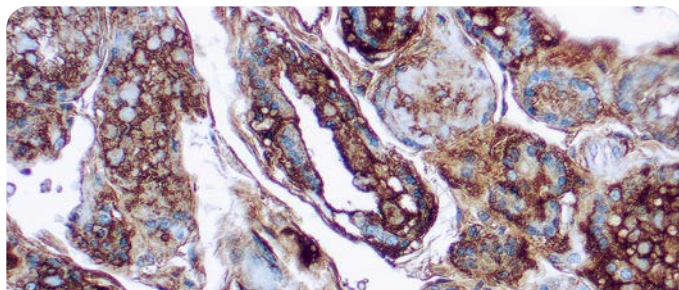


Formalin fixed paraffin embedded colon carcinoma stained with Thymidine Phosphorylase antibody.

**Thymidine Phosphorylase/Platelet-Derived Endothelial Cell Growth Factor**

<b>Catalog No.:</b>	Mob292 Concentrated
<b>Clone:</b>	P-GF.44C
<b>Immunogen:</b>	BALB/C mice were injected with a recombinant full length human thymidine phosphorylase (TP/PD-ECGF) protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic, Nuclear

This antibody is specific to a 55 kDa protein known as platelet-derived endothelial growth factor (PD-ECGF), or thymidine phosphorylase (TP). High levels of TP/PD-ECGF are observed in cancer patients. High intracellular levels of TP/PD-ECGF are associated with increased sensitivity to fluoropyrimidine chemotherapeutic agents.

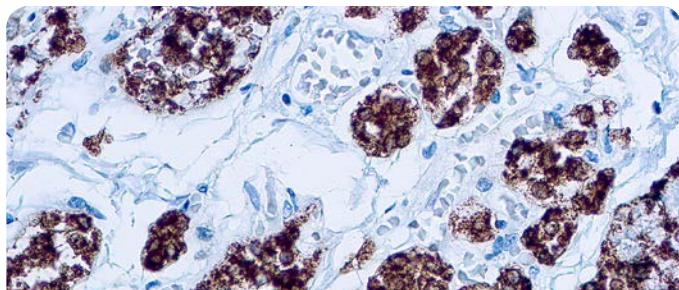


Formalin fixed paraffin embedded thyroid stained with Thyroglobulin antibody.

**Thyroglobulin**  **IVD**

<b>Catalog No.:</b>	Mob223 Concentrated PDM576 Prediluted
<b>Clone:</b>	1D4
<b>Immunogen:</b>	BALB/C mice were immunized with purified human thyroglobulin.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Thyroid
<b>Cellular Localization:</b>	Cytoplasmic

This antibody recognizes thyroglobulin in hyperplastic and neoplastic thyroid. Thyroglobulin is a protein of 670 kDa consisting of two identical subunits. Thyroglobulin is synthesized by the follicular epithelial cells of the thyroid.

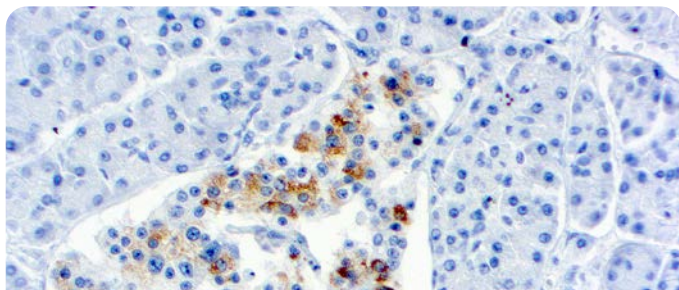


Formalin fixed paraffin embedded human thyroid stained with Thyroid Peroxidase antibody.

**Thyroid Peroxidase**  **IVD**

<b>Catalog No.:</b>	Mob418 Concentrated PDM418 Prediluted
<b>Clone:</b>	MoAb47
<b>Immunogen:</b>	Human thyroid peroxidase (hTPO) purified from thyroid microsomes by immunoaffinity chromatography.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Thyroid
<b>Cellular Localization:</b>	Cytoplasmic

Thyroid peroxidase (TPO) is a transmembrane protein of 107kDa containing a heme prosthetic group. It is present as a dimer on the apical surface of thyroid follicular cells. TPO is the primary enzyme involved in thyroid hormone synthesis. Malignant thyroid tumors exhibit an anomaly in TPO resulting in lower affinity for anti-TPO. This antibody may aid in the differentiation between benign and malignant thyroid tumors.

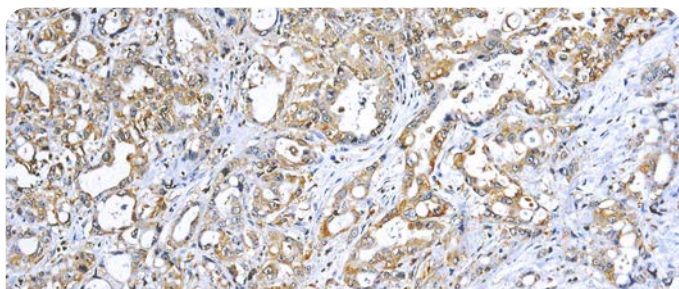


Formalin fixed paraffin embedded human pancreas stained with TIMP-2 antibody.

**TIMP-2**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob318, Mob318R - Concentrated
<b>Clone:</b>	3A4
<b>Immunogen:</b>	BALB/C mice were injected with a synthetic peptide from the N-terminal region of human TIMP-2.
<b>Isotype:</b>	IgG2a, kappa
<b>Positive Control:</b>	Colon carcinoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to 21 kDa protein known as TIMP-2. TIMP-1 and TIMP-2 are inhibitory enzymes of matrix metalloproteinase family. TIMP are of great importance in the maintenance of connective tissue integrity. TIMP-2 shows the highest binding affinity to both the latent (pro) and active forms of 72 kDa Type IV collagenase (MMP-2) and active form of 92 kDa type IV collagenase (MMP-9). TIMP inhibit the proteolytic invasiveness of tumor cells and normal placental trophoblast cells.

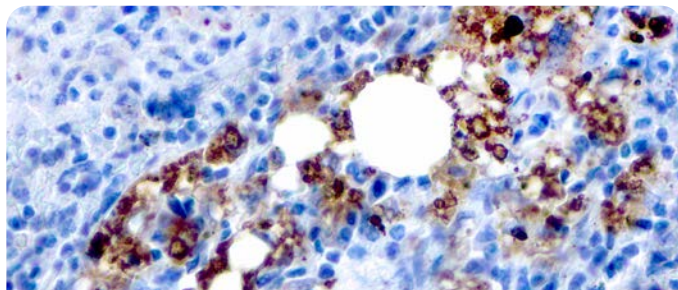


Formalin fixed paraffin embedded human breast carcinoma stained with TNF Alpha.

**TNF Alpha**  **IVD**

<b>Catalog No.:</b>	Mob502 Concentrated PDM230 Prediluted
<b>Clone:</b>	DBM15.28
<b>Immunogen:</b>	Recombinant full-length human TNF-alpha protein.
<b>Isotype:</b>	IgM, kappa
<b>Positive Control:</b>	Histiocytoma, colon, pancreas
<b>Cellular Localization:</b>	Cytoplasmic and extracellular (secreted)

This MAb recognizes human 17-26kDa protein, which is identified as cytokine TNF Alpha (Tumor Necrosis Factor Alpha). TNF Alpha is an important cell-signaling component of the immune system. It is a protein secreted by LPS stimulated macrophages, and causes tumor necrosis when injected into tumor-bearing mice. TNF Alpha is currently being evaluated in treatment of certain cancers and AIDS Related Complex.

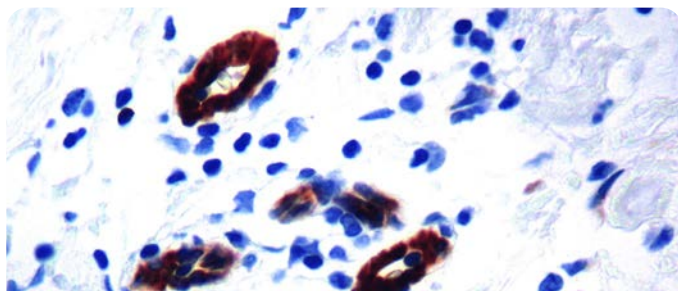


Formalin fixed paraffin embedded human Spleen stained with TRAcP

**TRAcP**  **IVD**

<b>Catalog No.:</b>	Mob490 Concentrated PDM203 Prediluted
<b>Clone:</b>	DBM15.2
<b>Immunogen:</b>	Recombinant full-length human ACP5 protein
<b>Isotype:</b>	IgG2b, kappa
<b>Positive Control:</b>	Spleen
<b>Cellular Localization:</b>	Cytoplasmic (Lysosomes)

It recognizes a protein of 35kDa, which is identified as tartrate-resistant acid phosphatase (TRAcP). Serum TRAcP 5a is secreted by macrophages and dendritic cells and increased in many patients of rheumatoid arthritis. Encephalopathy, Osteoclastoma and in osteoporosis and metabolic bone diseases. Anti-TRAcP antibody labels the cells of Hairy Cell Leukemia (HCL) with a high degree of sensitivity and specificity. Other cells stained with this antibody are tissue macrophages and osteoclasts.

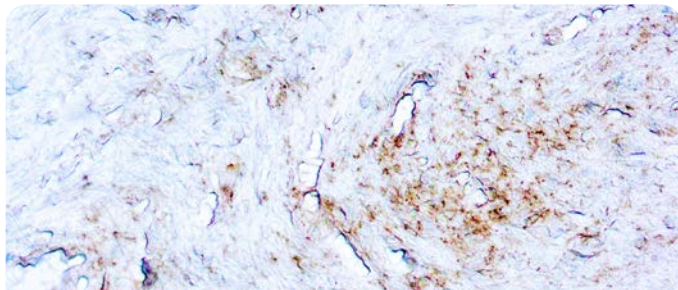


Formalin fixed paraffin embedded breast carcinoma stained with Transglutaminase II antibody.

**Transglutaminase II**  **IVD**

<b>Catalog No.:</b>	Mob353 Concentrated
<b>Clone:</b>	CUB 7402
<b>Immunogen:</b>	BALB/C mice were injected with purified guinea pig liver transglutaminase.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Cytoplasmic, cell membrane, extracellular matrix

This antibody reacts with a 77-85 kDa protein known as transglutaminase II (TGase II). TGase II catalyzes calcium-dependent post-translational modification of proteins by formation of an isopeptide bond within or between polypeptide chains. Different tissue and cell types express varying amounts of tissue transglutaminase.

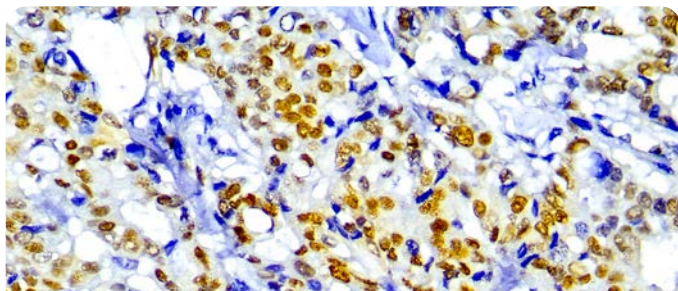


Formalin fixed paraffin embedded human T. Pallidum Siphis infected tissue stained with T. Pallidum.

**Treponema Pallidum**  **IVD** **RUO**

<b>Catalog No.:</b>	Mob577, Mob577R - Concentrated PDM577, PDM577R - Prediluted
<b>Clone:</b>	2121
<b>Immunogen:</b>	Full Length native protein corresponding to Treponema pallidum.
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	T. Pallidum Infected Tissue
<b>Cellular Localization:</b>	Cytoplasmic

Treponema pallidum is the causative agent of syphilis. It is a gram negative spirochete, a helical to sinusoidal bacterium with outer and cytoplasmic membranes, a thin peptidoglycan layer, and periplasmic flagella.

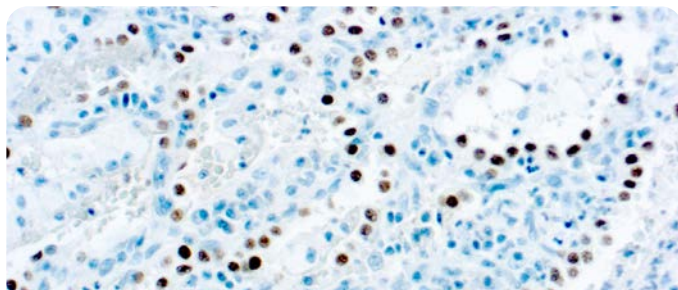


Formalin fixed paraffin embedded human Breast carcinoma stained with TRPS1.

**TRPS1**  **IVD**

<b>Catalog No.:</b>	RMAB114 Concentrated RMPD114 Prediluted
<b>Clone:</b>	EPR16171
<b>Immunogen:</b>	Recombinant human TRPS1 protein fragment
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Breast carcinoma
<b>Cellular Localization:</b>	Nuclear

TRPS1, Trichorhinophalangeal syndrome type 1, is a recombinant rabbit monoclonal antibody that helps in the identification of breast carcinoma, invasive or in situ. It provides good values in differentiating between primary and metastatic breast carcinoma in various body sites. It has been reported 1-4 that TRPS1 and GATA3 had comparable positive expressions in ER-positive (98% vs. 95%) and HER2-positive (87% vs. 88%) breast carcinomas.



Formalin fixed paraffin embedded lung adenocarcinoma stained with TTF-1.

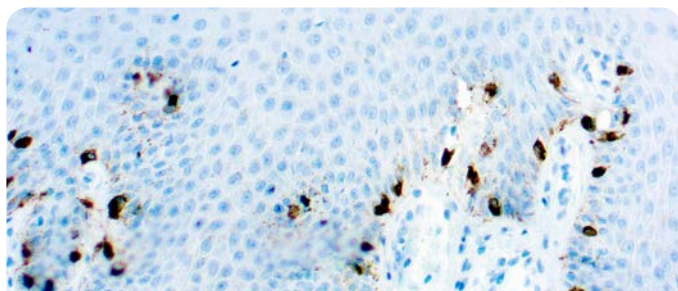
**TTF-1**  
(Thyroid Transcription Factor-1)



IVD

<b>Catalog No.:</b>	Mob285 Concentrated PDM104 Prediluted
<b>Clone:</b>	8G7G3/1
<b>Immunogen:</b>	BALB/C mice were injected with a recombinant rat protein.
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Lung
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to a 40 kDa protein, which is identified as thyroid transcription factor (TTF-1). TTF-1 is expressed in epithelial cells of the thyroid gland and lung. TTF-1 stains primary lung adenocarcinoma and small cell carcinoma but does not stain colon and breast carcinoma.



Formalin fixed paraffin embedded human melanoma stained with Tyrosinase antibody.

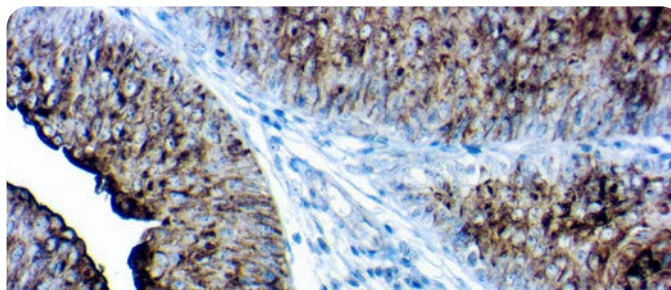
**Tyrosinase, Melanoma Marker**



IVD

<b>Catalog No.:</b>	Mob290 Concentrated PDM150 Prediluted
<b>Clone:</b>	T311
<b>Immunogen:</b>	BALB/C mice were injected with a recombinant tyrosinase protein.
<b>Isotype:</b>	IgG2a
<b>Positive Control:</b>	Melanoma
<b>Cellular Localization:</b>	Cytoplasmic

This antibody is specific to a cluster of proteins between 70-80 kDa known as tyrosinase. This antibody does not show any cross-reaction with MAGE-1 and tyrosinase-related protein-1, TRP-1/gp75. Staining of melanomas with this antibody showed tyrosinase in melanotic as well as amelanotic variants.



Formalin fixed paraffin embedded human Bladder Carcinoma stained with Uroplakin II & III Cocktail

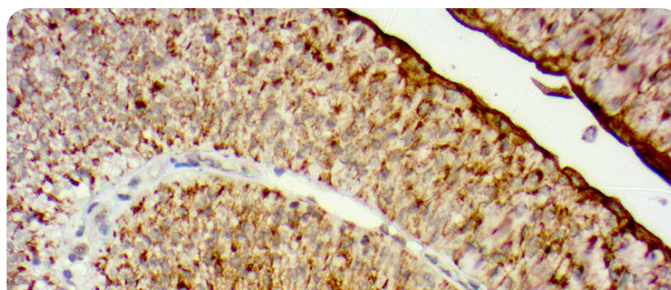
**Uroplakin II & III Cocktail**



IVD

<b>Catalog No.:</b>	RPM001 Concentrated PDRM002 Prediluted
<b>Clone:</b>	AU1 and Rabbit Polyclonal
<b>Immunogen:</b>	UPII: Peptide-KLH conjugate, UPIII: Raised in mouse using AUM preparation from bovine urinary bladder as the immunogen
<b>Positive Control:</b>	Bladder Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Membranous

Uroplakins (UPs) are a family of transmembrane proteins (UPs Ia, Ib, II and III) that are specific differentiation products of urothelial cells. In non- neoplastic mammalian urothelium, UPs are expressed in the luminal surface plasmalemma of superficial (umbrella) cells, Uroplakin II/III cocktail is specific for tumors of urothelial origin and, when used in combination with other markers, can aid in the diagnosis of primary and metastatic tumors.



Formalin fixed paraffin embedded human Bladder carcinoma stained with Uroplakin II (UPK2)

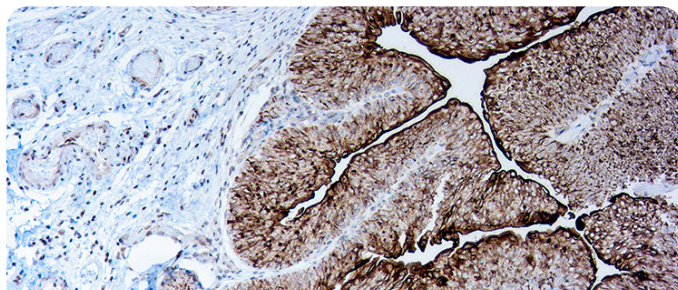
**Uroplakin II (UPK2)**



IVD

<b>Catalog No.:</b>	RP177 Concentrated PDR177 Prediluted
<b>Clone:</b>	Polyclonal
<b>Immunogen:</b>	Peptide-KLH conjugate
<b>Positive Control:</b>	Bladder Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Membranous

Uroplakins (UPs) are a family of transmembrane proteins (UPs Ia, Ib, II and III) that are specific differentiation products of urothelial cells. Uroplakins are markers of terminally differentiated urothelium. Uroplakin II (UPII) is a newly described sensitive marker for urothelial carcinoma (UC). The expression profile of UPII in different types of UC and its utility in the diagnostic setting are needed.



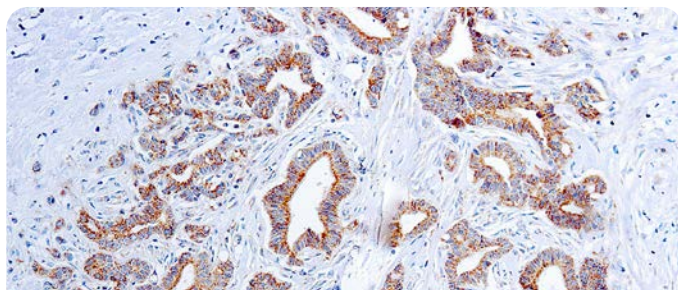
Formalin fixed paraffin embedded human Bladder carcinoma stained with Uroplakin III (AU1)

### Uroplakin III (AU1)



<b>Catalog No.:</b>	Mob594 Concentrated PDM594 Prediluted
<b>Clone:</b>	AU1
<b>Immunogen:</b>	Raised in mouse using AUM preparation from bovine urinary bladder as the immunogen
<b>Isotype:</b>	IgG1
<b>Positive Control:</b>	Bladder Carcinoma
<b>Cellular Localization:</b>	Cytoplasmic and Membranous

Uroplakins (UPs) are a family of transmembrane proteins (UPs Ia, Ib, II and III) that are specific differentiation products of urothelial cells. In non-neoplastic mammalian urothelium, UPs are expressed in the luminal surface plasmalemma of superficial (umbrella) cells, forming complexes of 16nm crystalline particles. UPIII is specific for tumors of urothelial origin and, when used in combination with other markers, can aid in the diagnosis of primary and metastatic tumors.



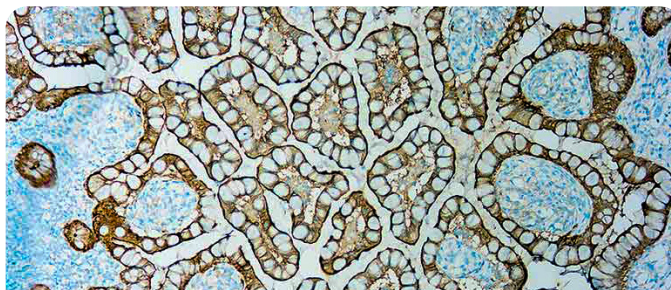
Formalin fixed paraffin embedded human kidney stained with VEGF antibody.

### Vascular Endothelial Growth Factor (VEGF)



<b>Catalog No.:</b>	Mob308 Concentrated PDM165 Prediluted
<b>Clone:</b>	VG1
<b>Immunogen:</b>	BALB/C mice were injected with a recombinant VEGF protein.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Angiosarcoma
<b>Cellular Localization:</b>	cytoplasmic, cell membrane, extracellular matrix

This antibody is specific to a cluster of proteins between 19-22 kDa (reduced). VEGF is a homodimeric disulfide-linked glycoprotein involved in angiogenesis, which promotes tumor progression and metastasis. It exhibits potent mitogenic and permeability-inducing properties specific for the vascular endothelium.



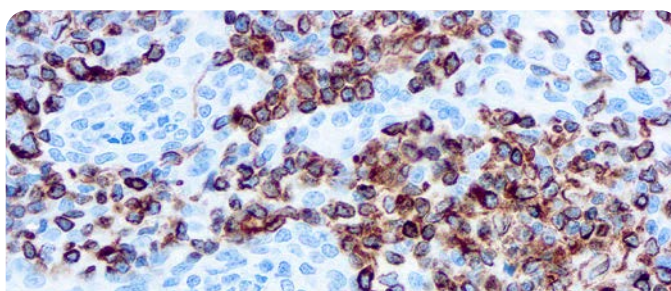
Formalin fixed paraffin embedded human Colorectal carcinoma stained with Villin

### Villin



<b>Catalog No.:</b>	Mob590 Concentrated PDM590 Prediluted
<b>Clone:</b>	1D2C3
<b>Immunogen:</b>	Raised against purified full length native Villin of chicken origin
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Small intestine, Colorectal carcinoma
<b>Cellular Localization:</b>	Apical membranous (brush border)/ Cytoplasmic

Villin is one of the gelsolin family of calcium regulated actin binding proteins. Normally expressed in the brush border of epithelial cells lining the gastrointestinal tract, hepatobiliary tract and renal proximal convoluted tubules. In colorectal carcinoma, villin is highly expressed. In practice, villin can be included in the panel used for metastatic carcinoma to detect colorectal origin.



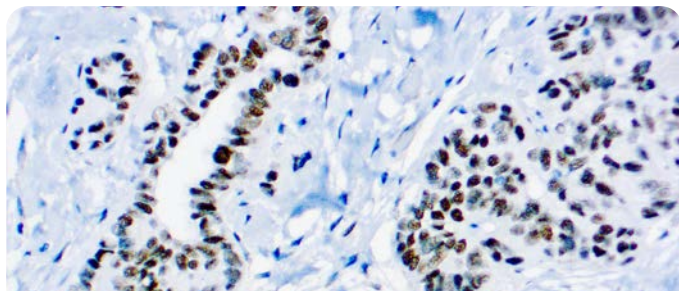
Formalin fixed paraffin embedded human tonsil stained with Vimentin antibody.

### Vimentin, Porcine



<b>Catalog No.:</b>	Mob090 Concentrated PDM029 Prediluted
<b>Clone:</b>	V9
<b>Immunogen:</b>	BALB/C mice were injected with purified vimentin from porcine eye lens.
<b>Isotype:</b>	IgG1, kappa
<b>Positive Control:</b>	Sarcoma, tonsil
<b>Cellular Localization:</b>	Cytoplasm

This antibody reacts with the 57 kDa intermediate filament protein present in the cells of mesenchymal origin. The antibody does not show any cross-reactivity with other intermediate filament proteins. However, it shows a broad interspecies cross-reactivity.

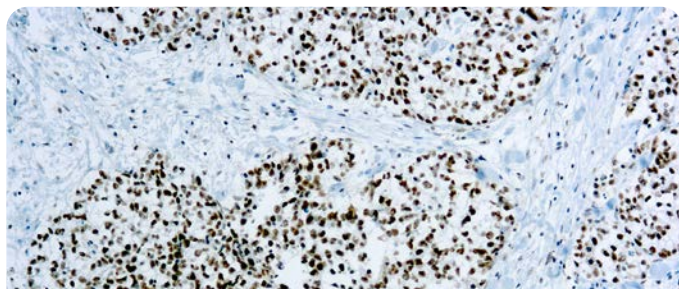


Formalin fixed paraffin embedded Wilms tumor stained with WT-1 antibody.

### Wilms Tumor-1 Protein (WT-1) IVD

<b>Catalog No.:</b>	Mob437 Concentrated PDM177 Prediluted
<b>Clone:</b>	6F-H2
<b>Immunogen:</b>	BALB/C mice were injected with truncated human WT1 protein corresponding to N-terminal amino acids 1-181.
<b>Isotype:</b>	IgG1, Kappa
<b>Positive Control:</b>	Wilms tumor
<b>Cellular Localization:</b>	Nuclear and/or cytoplasmic

Wilms tumor-1 (WT-1), is a gene involved in the induction of Wilms tumor, a pediatric renal malignancy. Wilms tumor is associated with mutations of WT-1, a zinc-finger transcription factor that is essential for the development of the metanephric kidney and the urogenital system. The WT-1 gene is normally expressed in fetal kidney and mesothelium, and its expression has been suggested as a marker for Wilms tumor and mesothelioma.



Formalin fixed paraffin embedded human testis stained with XRCC1 antibody.

### XRCC1 IVD

<b>Catalog No.:</b>	Mob325, Mob325R - Concentrated
<b>Clone:</b>	33-2-5
<b>Immunogen:</b>	BALB/C mice were injected with recombinant human XRCC1 protein.
<b>Isotype:</b>	IgG2b
<b>Positive Control:</b>	Testis
<b>Cellular Localization:</b>	Nuclear

This antibody is specific to an 85 kDa protein known as XRCC1. X-ray repair cross complementing 1 (XRCC1) protein plays a role in excision repair of DNA after ionizing irradiation. XRCC1 binds to DNA ligase III through the C-terminal 96 amino acids and to DNA polymerase  $\beta$  through the N-terminal half. In testis XRCC1 is expressed at high levels.

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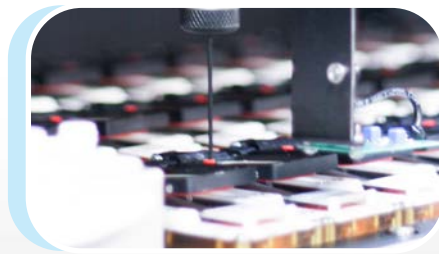
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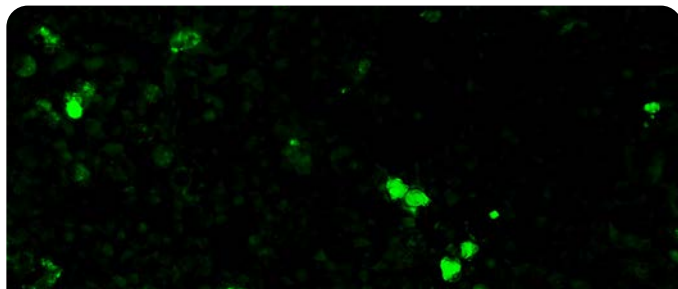


# Conjugated Antibodies



## FITC Conjugated Antibodies

Diagnostic BioSystems offers fluorescein isothiocyanate (FITC) conjugated antibodies. Fluorescent dye-conjugated antibodies can be used in a variety of applications such as immunohistochemistry, fluorescence microscopy and flow cytometry.



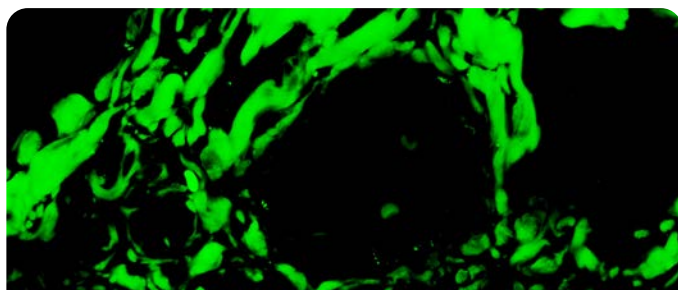
Formalin fixed paraffin embedded human spleen stained with C1q Complement-FITC

### C1q Complement FITC IVD

**Catalog No.:** F010

**Immunogen:** C1q isolated from the normal human serum.

This antibody reacts with the human C1q complement. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.



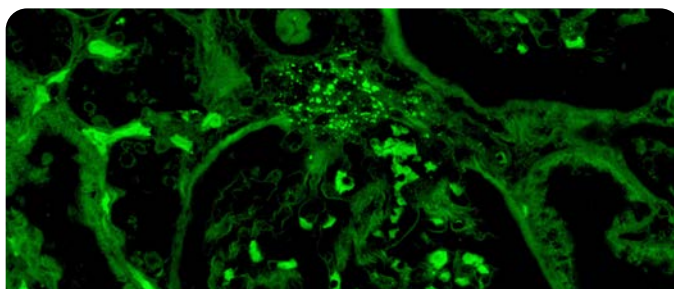
Formalin fixed paraffin embedded human liver stained with C3c Complement-FITC.

### C3c Complement FITC IVD

**Catalog No.:** F003

**Immunogen:** C3c Complement isolated from complement-activated human serum.

This antibody reacts with the human C3c complement and the C3c part of C3 and C3b. It may cross react with the C3c complement from cat, cow, dog, goat, guinea pig, kangaroo, mink, mouse, rat, sheep, and swine. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may be also used for other applications.



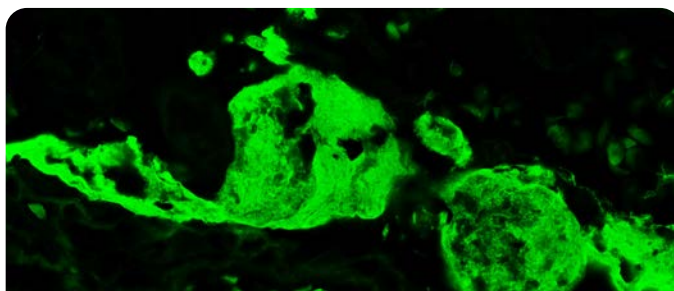
Formalin fixed paraffin embedded human kidney stained with C4c Complement-FITC.

### C4c Complement FITC IVD

**Catalog No.:** F005

**Immunogen:** C4c Complement isolated from complement-activated human serum.

This antibody reacts with human C4, C4b, and C4c but does not react with the C4d epitope. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.



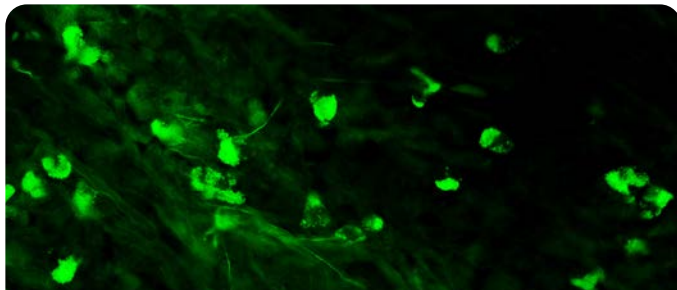
Formalin fixed paraffin embedded human placenta stained with Fibrinogen-FITC.

### Fibrinogen FITC IVD

**Catalog No.:** F006

**Immunogen:** Fibrinogen isolated from human plasma.

This antibody reacts with native fibrinogen and with fibrinogen fragments D, E, X, and Y. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.



Formalin fixed paraffin embedded human tonsil stained with IgA-FITC.

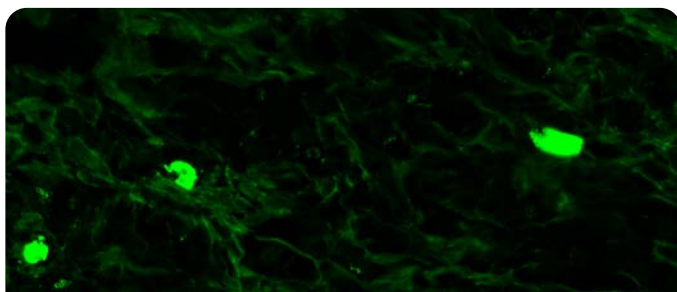
**IgA (alpha chain) FITC**



Catalog No.: F007

Immunogen: IgA isolated from human serum.

This antibody reacts with the alpha chain of human IgA. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.



Formalin fixed paraffin embedded human tonsil stained with IgG-FITC.

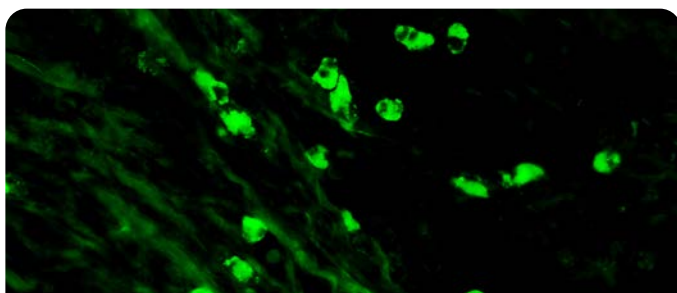
**IgG (Gamma chain) FITC**



Catalog No.: F008

Immunogen: IgG isolated from human serum.

This antibody reacts with the gamma chain of human IgG. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.



Formalin fixed paraffin embedded human tonsil stained with IgM-FITC.

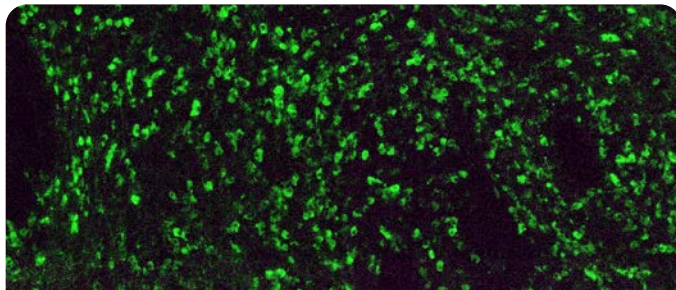
**IgM (Mu chain) FITC**



Catalog No.: F009

Immunogen: IgM isolated from the serum of a patient with Waldenstrom's macroglobulinaemia.

This antibody reacts with the Mu chain of human IgM. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.



Formalin fixed paraffin embedded human tonsil stained with Kappa-FITC.

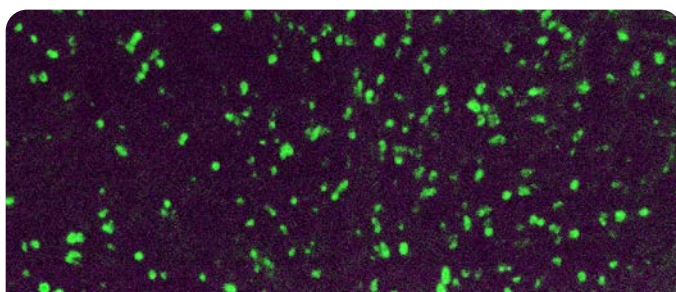
**Kappa Light Chain FITC**



Catalog No.: F001

Immunogen: Pool of human kappa light chain isolated from the urine of patients with Bence Jones Proteinuria.

Traces of contaminating antibodies have been removed by solid phase absorption. Only the kappa precipitation line appeared in cross immunoelectrophoresis. This antibody is well suited for tissue section staining but may be used for other applications.



Formalin fixed paraffin embedded human tonsil stained with Lambda-FITC.

**Lambda Light Chain FITC**



Catalog No.: F002

Immunogen: Pool of human Lambda light chain isolated from the urine of patients with Bence Jones Proteinuria.

Traces of contaminating antibodies have been removed by solid phase absorption. Only the lambda precipitation line appeared in cross immunoelectrophoresis. This antibody is well suited for tissue section staining but may also be used for other applications.

**ImmunoHisto-Sealer™**

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# Notes:

Lined area for notes.

# Detection Systems



## Detection Systems

Immunohistochemistry is a highly sensitive method that allows the localization of antigens within a cell or a tissue with high resolution. The method is based on the use of a primary antibody that specifically binds to its complimentary antigen. The bound antigen may be visualized by a variety of methods.

Diagnostic BioSystems offers 3 major types of **IHC detection systems**.

**UnoVue™:** It is a polymer based 1 step detection system for biotin-free immunohistochemistry. It is developed by directly labelling immunoglobulins with enzymes using a proprietary tandem hyperlabelling technology.

**PolyVue™ Plus:** It is a highly sensitive, biotin-free immunostaining detection system formulated to simultaneously detect mouse as well as rabbit antibodies. PolyVue™ Plus employs an enhancer reagent with the polymeric enzyme linked anti-rabbit and anti-mouse immunoglobulins for 2 detections. It ensures higher sensitivity and lower background.

**SITVue™:** It is a rapid 3 step detection system formulated to simultaneously detect mouse as well as rabbit antibodies. SITVue/DAB detection kit is based on an enzyme-mediated reaction that utilizes horseradish peroxidase (HRP) to catalyze the deposition of two separate Linkers applied sequentially onto tissue sections or cell preparation. The deposited Linkers can be detected with a streptavidin-peroxidase conjugate followed by a reaction with a peroxidase substrate/chromogen solution such as diaminobenzidine (DAB). SITVue /DAB Detection System results in a significant increase in sensitivity compared to standard IHC detection methods, while maintaining similar specificity.



  
**HRP**  
**DAB**  
Detection Systems

**One**  
STEP

**UNOVUE™**  
One Step DAB Detection System



**Two**  
STEP

**POLYVUE™**  
Two Step DAB Detection System



**Three**  
STEP

**SITVUE™**  
Rapid Three Step DAB Detection System





# UNOVUE™

One Step DAB Detection System

One Step

## Anti Mouse/Rabbit UnoVue™ HRP/DAB Detection System

It is a polymer based 1 step detection system for biotin-free immunohistochemistry. It is developed by directly labelling immunoglobulins with enzymes using a proprietary tandem hyperlabelling technology.

### Key Features:

- Faster staining and lower background
- Compatible to detect both mouse and rabbit antibodies with single reagent
- Non-biotin based, one-step detection Kit
- Developed by superior tandem hyper-labelling technology - ensures consistent and reproducible immunodetection
- Suitable for FFPE tissue sections and cryostat sections
- Consistent and reliable results throughout the shelf-life of the product.



### Kit Components and Catalog Numbers

Reagent Volumes	25 Tests	100 Tests	250 Tests	1000 Tests	10000 Tests
Catalog Number	UMR25PD	UMR100PD	UMR250PD	UMR1000PD	UMR10000PD
Peroxidase block	2.5 mL	10 mL	25 mL	100 mL	1000 mL
Anti Mouse/Rabbit HRP Polymer	2.5 mL	10 mL	25 mL	100 mL	1000 mL
Stable DAB/Plus Buffer	10 mL	15 mL	40 mL	200 mL	2000 mL
Stable DAB/Plus Chromogen	0.5 mL	1 mL	2 mL	5 mL	50 mL
Empty mixing bottle for Stable DAB/Plus	3 mL bottle	15 mL bottle	15 mL bottle	15 mL bottle	15 mL bottle

**UnoVue Plus™**  
Mouse/Rabbit HRP Detection Component   

**Catalog No.:** MRU-HRP100 - 100 Tests  
MRU-HRP1000 - 1000 Tests

UnoVue Plus Mouse/Rabbit HRP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus HRP Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**UnoVue™**  
Mouse AP Detection Reagent  

**Catalog No.:** MU-AP100 - 100 Tests  
MU-AP1000 - 1000 Tests

UnoVue Mouse AP Detection Reagent is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Detection Reagent may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Mouse AP Detection Reagent

**UnoVue Plus™**  
Mouse HRP/DAB Detection System  

**Catalog No.:** UM100PD - 100 tests

The UnoVue Plus Mouse HRP/DAB Detection System is a polymer-based 1-step horseradish peroxidase-labeled detection system for immunohistochemistry. This kit can detect mouse IgG and IgM antibodies, with significantly lower background than biotin/avidin detection systems. The Mouse UnoVue Plus HRP/DAB Detection System can be used for manual staining or with any automated staining instrument. The working solution of Stable DAB/Plus is stable for a week, offering convenience and cost savings due to less hazardous waste generation. This species-specific detection system is particularly useful for multiplex immunohistochemical staining assays.

**Kit Contents:** Peroxidase Block, Anti-Mouse HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, and an empty mixing bottle for Stable DAB/Plus.

**UnoVue Plus™**  
Mouse/Rabbit AP Detection Component   

**Catalog No.:** MRU-AP100 - 100 Tests  
MRU-AP1000 - 1000 Tests

UnoVue Plus Mouse/Rabbit AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Mouse/Rabbit AP Detection Component

**UnoVue Plus™**  
Mouse/Rabbit HRP Detection Component   

**Catalog No.:** MRU-HRP100 - 100 Tests  
MRU-HRP1000 - 1000 Tests

UnoVue Plus Mouse/Rabbit HRP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus HRP Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Mouse/Rabbit HRP Detection Component

**UnoVue Plus™**  
Rabbit AP Detection Component  

**Catalog No.:** RU-AP100 - 100 Tests  
RU-AP1000 - 1000 Tests

UnoVue Plus Rabbit AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Rabbit AP Detection Component

**UnoVue Plus™**  
Rabbit HRP Detection Reagent  

**Catalog No.:** RU-HRP100 - Tests  
RU-HRP1000 - Tests

UnoVue Rabbit HRP Detection Reagent is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue detection reagent may also be used with blood smears, cytosmears, and cell preparations.



**SITVUE™**  
Rapid Three Step DAB Detection System

**SPEED MATTERS**  
RESULT IN 

Improving Health. Saving Lives.

**SITVUE™**  
Rapid Three Step DAB Detection System

**SPEED MATTERS**  
RESULT IN  

# POLYVUE™

Two Step DAB Detection System



## Anti Mouse/Rabbit PolyVue™ Plus HRP/DAB Detection System

Diagnostic BioSystems' PolyVue Plus™ is a highly sensitive, biotin-free immunostaining detection system formulated to simultaneously detect mouse as well as rabbit antibodies. PolyVue™ Plus employs an enhancer reagent with the polymeric enzyme-linked anti-rabbit and anti-mouse immunoglobulins for two-step detection yielding higher sensitivity while maintaining the extremely clean background. The enhanced sensitivity of PolyVue™ Plus enables superior detection of antibodies at lower concentration or weaker signals.

The PolyVue™ Plus Mouse/Rabbit HRP/DAB Detection System is a non-biotin, two-step detection system suitable for labeling antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The PolyVue™ Plus Detection System may also be used with blood smears, cytospreads, and cell preparations. This system has been developed by directly labeling immunoglobulins with enzymes using a proprietary tandem hyperlabelling technology. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membrane antigens in different types of tissues with significantly lower background than detection systems using biotin and avidin conjugates.

### Key Features:

- High Sensitivity
- High Specificity
- Clean & Clear Background
- High Reproducible Staining Results
- Suitable for Manual Staining as well as Automated Stainer's
- Shorter Incubation Times



Detection Systems

### Kit Components and Catalog Numbers

Reagent Volumes	25 Tests	100 Tests	250 Tests	1000 Tests
Catalog Number	PVP25D	PVP100D	PVP250D	PVP1000D
Tissue Primer™	2.5 mL	10 mL	25 mL	100 mL
Background Blocker	2.5 mL	10 mL	25 mL	100 mL
PolyVue™ Plus Mouse/Rabbit Enhancer	2.5 mL	10 mL	25 mL	100 mL
PolyVue™ Plus Mouse/Rabbit HRP Label	2.5 mL	10 mL	25 mL	100 mL
Stable DAB/Plus™ Buffer	15 mL	15 mL	45 mL	200 mL
Stable DAB/Plus™ Chromogen	1 mL	1 mL	2.0 mL	5 mL
Empty mixing bottle for Stable DAB/Plus	3 mL	15 mL	15 mL	15 mL



Rapid Three Step DAB Detection System

Three Step

### Anti Mouse/Rabbit SITVue™ HRP/DAB Detection System

It is a rapid 3 step detection system formulated to simultaneously detect mouse as well as rabbit antibodies. SITVue/DAB detection kit is based on an enzyme-mediated reaction that utilizes horseradish peroxidase (HRP) to catalyze the deposition of two separate Linkers applied sequentially onto tissue sections or cell preparation. The deposited Linkers can be detected with a streptavidin-peroxidase conjugate followed by a reaction with a peroxidase substrate/chromogen solution such as diaminobenzidine (DAB). SITVue /DAB Detection System results in a significant increase in sensitivity compared to standard IHC detection methods, while maintaining similar specificity.

#### Key Features:

- Rapid 3-step IHC protocol
- Results in less than 30 minutes
- Optimized for use with Diagnostic BioSystems concentrated & ready-to-use IHC antibodies

Detection Systems



#### Kit Components and Catalog Numbers

Reagent Volumes	25 Tests	100 Tests	1000 Tests
Catalog Number	SIT-25D	SIT-100D	SIT-1000D
Tissue Primer	2.5 mL	10 mL	100 mL
Linker 1	2.5 mL	10 mL	100 mL
Linker 2	2.5 mL	10 mL	100 mL
Tracer	2.5 mL	10 mL	100 mL
Stable DAB/Plus Buffer	4 mL	15 mL	200 mL
Stable DAB/Plus Chromogen	0.5 mL	1 mL	5 mL
Empty mixing bottle for Stable DAB/Plus	15 mL bottle	15 mL bottle	15 mL bottle

# MOH'S™ HRP green kit

## HRP Detection System

The Diagnostic BioSystems HRP-Green kit is designed for rapid IHC staining of frozen tissue sections and paraffin-embedded tissue sections. When the time to final results is critical, such as Mohs micrographic surgery, this Mohs HRP-Green Kit can provide reliable IHC results in less than 20 minutes specifically for frozen sections. This Mohs HRP-Green kit utilizes a permeabilization pretreatment step in a microwave which improves staining considerably.

### Key Features:

- Improved accessibility of antigens in frozen tissue sections.
- Green chromogen provides better contrast to endogenous melanin.
- Rapid two-step immunohistochemistry protocol.
- Time to results in less than 20 minutes.
- Optimized for use with Diagnostic BioSystems Ready to Use IHC antibodies.



### Ordering Information, Cat.# K092

Components	Format	Volume
HRP-Polymer	Ready-To-Use	20ml
PermaGreen/HRP Substrate buffer	Ready-To-Use	30ml
PermaGreen/HRP Chromogen	50x Concentrate	1ml
Purple Hematoxylin	Ready-To-Use	20ml
10X Tris EDTA Buffer For Permeabilization pretreatment, pH 9.0	10x Concentrate	50ml
Rapid Histo-Sealer (10X)™	10x Concentrate	10ml

# MOM UNOVUE™

HRP/DAB Detection System

The Mouse on Mouse UnoVue™ HRP/DAB Detection System is a non-biotin, one-step detection system suitable for detecting mouse antigens on mouse tissue sections. The UnoVue™ detection system may be used with formalin-fixed paraffin embedded and cryostat sections, as well as blood smears, cytosmears, and cell preparations.

## Key Features:

- Suitable for detecting mouse antigens on mouse tissue sections.
- Suitable for use with mouse IgG and IgM antibodies, both monoclonal and polyclonal.
- Ensures consistent and reproducible immunodetection of mouse antibodies against nuclear, cytoplasmic, and membrane antigens in different types of tissues.

Detection Systems



## Kit Components, Cat.# MMU100PDR, MMU25PDR

Reagents	25 Tests	100 Tests
Tissue Primer	2.5 mL	10 mL
Mouse on Mouse (MOM) Blocking Reagent	2.5 mL	10 mL
Mouse UnoVue™ HRP Polymer	2.5 mL	10 mL
Stable DAB/Plus Buffer	10 mL	15 mL
Stable DAB/Plus Chromogen	0.25 mL	1 mL
Empty mixing bottle for Stable DAB/Plus	3 mL bottle	15 mL bottle

# HighLighter Core Kit

Ensures consistent, reliable results.

# HighLighter™

Fully Automated Slide Stainer

- A cutting-edge detection system designed to use with our Fully Automated Slide Stainer: HighLighter
- Precision Detection for Accurate IHC Results

### Key Features:

**High Sensitivity and Specificity:** Delivers clear, distinct staining.

**Time Efficiency:** Reduces assay time, enabling quicker results without compromising quality.

**Enhanced Reproducibility:** Standardized protocols ensure consistent results.

**Ready-to-Use Components:** No dilution or additional preparation needed, streamlining lab workflow.

**Complete Workflow solution:** Has all the reagents needed to perform the IHC staining. Just add in the required primary antibody and wash buffer and you are ready to perform IHC staining.



Detection Systems

### Kit Components, Cat.# HL72K, HL720K

Components	Cap Sticker	Vol (72 Tests)	Vol (720 Tests)
DP1(Dewax solution-1)	DP1	11 mL (2 vials)	220 mL (1 vial)
DP2(Dewax solution-2)	DP2	11 mL (2 vials)	220 mL (1 vial)
CA2(RTU Citrate buffer, pH 6.0)	CA2	15 mL (2 vials)	300 mL (1 vial)
EA1(RTU Tris EDTA buffer, pH 9.0)	EA1	15 mL (2 vials)	300 mL (1 vial)
Tissue Primer	TP	11 mL (2 vials)	220 mL (1 vial)
Background Blocker	BB	11mL (1 vial)	110 mL (1 vial)
Mouse/Rabbit Linker	M/R-L	11 mL (1 vial)	110 mL (1 vial)
HRP Polymer	HRP	11 mL (1 vial)	110 mL (1 vial)
DAB-Auto buffer	DAB-B	10mL (1 vial)	100 mL (1 vial)
DAB-Auto Chromogen	DAB-C	10 mL (1 vial)	100 mL (1 vial)
Blue Hematoxylin	HEMA	11mL (1 vial)	110mL (1 vial)

## Streptavidin Biotin Based Detection System


Diagnostic BioSystems offers immunostaining detection systems based on streptavidin/biotin technology. We offer convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

Kit	Test Size	Catalog No.
Peroxidase Mouse & Rabbit Kit (DAB Liquid)	1000 tests/100 tests	KP500L/KP50L
Peroxidase Mouse & Rabbit Kit*	1000 tests/100 tests	KP500/KP50
Alkaline Phosphatase Mouse & Rabbit Kit (Fast Red)	1000 tests/100 tests	KA500F/KA50F
Alkaline Phosphatase Mouse & Rabbit Staining Kit *	1000 tests/100 tests	KA500/KA50

\* These kits do not contain any substrate/chromogen

### Ready-to-Use Kits Components

Kit Component	Volume	Catalog No.
Mouse & Rabbit Link	100ml	M006
HRP Label	100ml	M008
ALP Label	100ml	M010



*Elite*  
**PAP PEN**

- PAP pen is a special marking pen which is globally accepted and widely used.
- Ensures 100% hydrophobic barriers on the slides for your IHC needs.
- Designed to prevent wastage of valuable reagents.
- Ensures Antibody and detection systems within the target area.
- Can be used for immunostaining of paraffin sections, frozen sections, and for fluorescent antibody methods.



# Chromogens



## Chromogens

New discoveries in the clinic are demanding more functionality from IHC. Diagnostic BioSystems offers novel proprietary chromogens in Brown, Red, Green, Yellow and Blue for easy to develop multistains in your own lab. Use of high-quality, novel chromogens results in robust staining, making results reproducible and trustworthy.

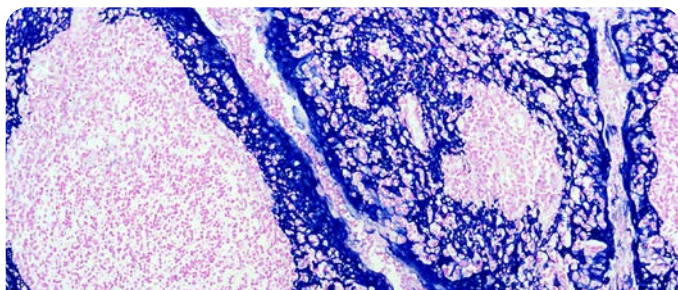
- High Quality Staining - Detect and diagnose with confidence
- Broad Applicability - Single and Multiplex IHC and ISH

**Diagnostic BioSystems provides chromogens with two commonly used enzyme labels:**

- Horse Radish Peroxidase (HRP)
- Alkaline Phosphatase (AP)

### Chromogens for AP

Chromogens



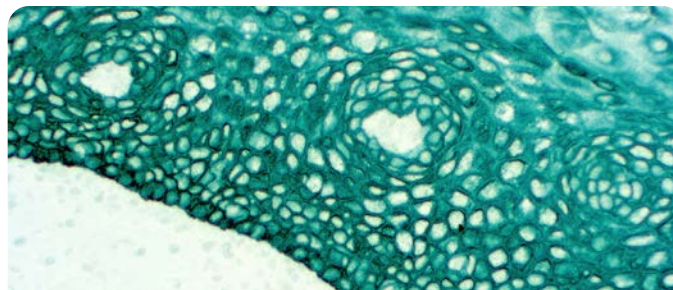
Formalin fixed paraffin embedded human tonsil stained with HMW CK antibody (PDM074) labeled with PermaBlue Plus/AP Chromogen (K058) produces a distinct bright blue color.

#### PermaBlue Plus/AP

**IVD**

**Catalog No.:** K058, 30ml Ready-to-Use  
K058-110, 110ml Ready-to-Use

PermaBlue/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlue Plus/AP has been reformulated to increase stability of the working solution while producing a distinct bright blue color. PermaBlue Plus/AP is insoluble in alcohol and xylene substitutes; therefore sections can be dehydrated in alcohol, cleared in xylene substitute, and permanently mounted.



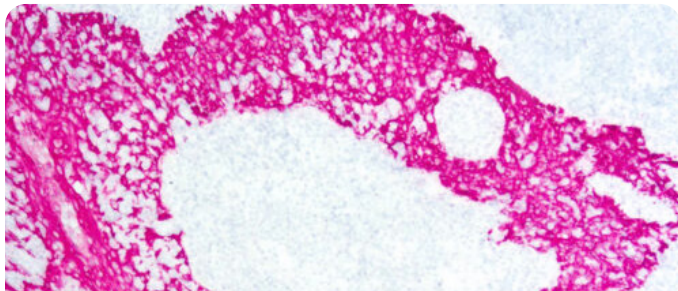
Formalin fixed paraffin embedded human tonsil stained with HMW CK antibody (PDM074) labeled with PermaGreen Plus/AP Chromogen (K059) produces a strong green color.

#### PermaGreen Plus/AP

**IVD**

**Catalog No.:** K059, 30ml Ready-to-Use  
K059-110, 110ml Ready-to-Use

PermaGreen Plus/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaGreen Plus/AP has been modified to increase staining intensity, producing a strong green color that is insoluble in alcohol and xylene substitutes; therefore sections can be dehydrated in alcohol, cleared in a xylene substitute, and permanently mounted.

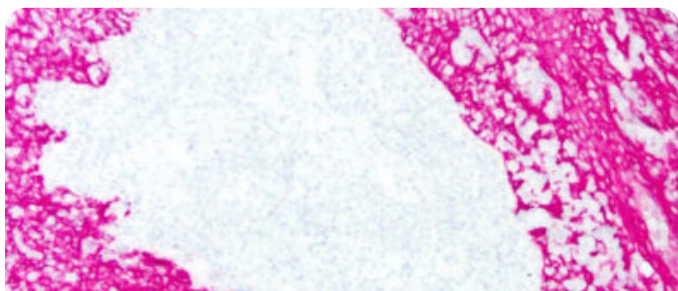


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W antibody (PDM 074) labeled with PermaRed/AP-Auto Chromogen (K049)

**PermaRed/AP (Alcohol & Xylene Compatible) IVD**

**Catalog No.:** K049, 30ml Ready-to-Use  
K049-110, 110ml Ready-to-Use

PermaRed/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaRed/AP produces a brilliant dark red color. PermaRed/AP is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.



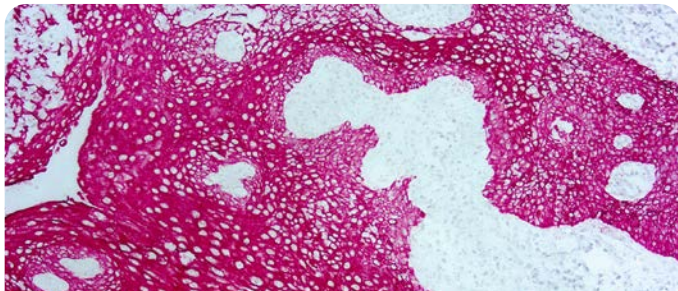
Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W antibody (PDM 074) labeled with PermaRed/AP-Auto Chromogen (K049)

**PermaRed/AP-Auto (For Use on Automated Staining Platforms) IVD**

**Catalog No.:** K049-Auto 30ml Ready-to-Use  
K049-Auto-110 110ml Ready-to-Use

PermaRed/AP-Auto produces a red color, ranging from pink to brilliant dark red, depending on the signal intensity. It is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

PermaRed/AP-Auto has been formulated for on-slide mixing. The instrument should be programmed to apply the substrate-buffer to the slide followed by application of the chromogen reagent. The substrate-buffer and chromogen components are stable in their separate formats. They can be loaded into the reagent rack at the beginning of the staining run with the other reagents, for walk away convenience.



Formalin fixed paraffin embedded squamous cell carcinoma human tissue stained with CK 5/6 antibody (Mob362) labeled with PermaRed AutoPlus (K057) produces a brilliant red color.

**PermaRed/AP-AutoPlus IVD**

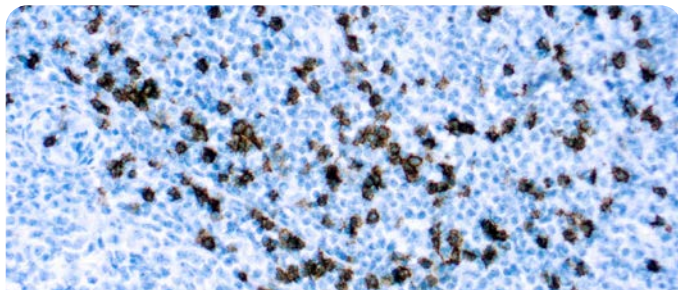
**Catalog No.:** K057-AutoPlus, 30ml Ready-to-Use  
K057-AutoPlus-110, 110ml Ready-to-Use

PermaRed/AP-Auto/Plus produces a red color, ranging from pink to brilliant dark red, depending on the signal intensity. It is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

Chromogens

**ImmunoHisto-Sealer™**  
Visit us at [www.dbiosys.com](http://www.dbiosys.com)

## Chromogens for HRP



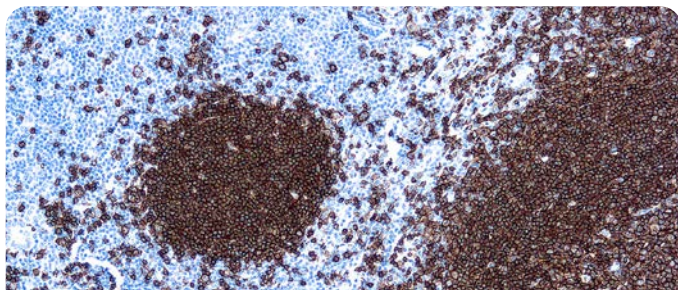
Formalin fixed paraffin embedded human tonsil stained with CD8 and labeled with DAB Auto (K081).

### DAB Auto

IVD

**Catalog No.:** K081-AUTO, 30ml Ready-to-Use  
K081-AUTO-110, 110ml, 1000ml, Ready-to-Use

DAB, a widely used chromogen for immunoperoxidase staining, is well accepted among pathologists because of its high sensitivity and cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated, cleared, and mounted for permanent record keeping. DAB Auto is more sensitive than traditional DAB and it is easier to prepare. Labs can prepare the volume they need, resulting in less wastage of reagents. It is Ideal for automated stainers with on-board mixing capabilities.



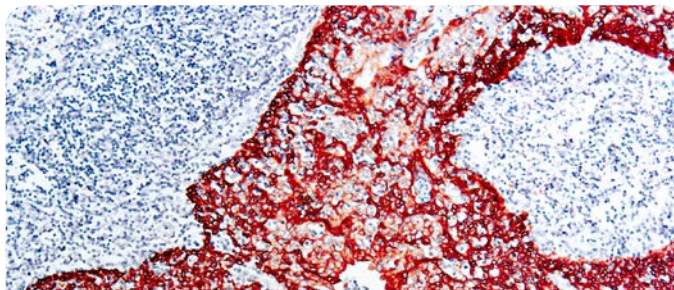
Formalin fixed paraffin embedded human tonsil stained with CD20 antibody (PDM004) labeled with High Contrast DAB (K055) produces a dark chocolate brown color.

### High Contrast DAB

IVD

**Catalog No.:** K055, 200ml Ready-to-Use

DAB, is a widely used chromogen for immunoperoxidase staining, and is well accepted among pathologists because of its increased sensitivity and decreased background when compared to amino ethylcarbazole (AEC). Specimens stained with DAB can be dehydrated, cleared, and permanently mounted. High Contrast DAB is more sensitive and stable than traditional working DAB solutions.



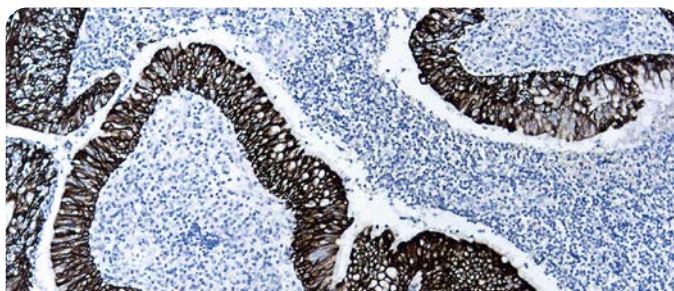
Formalin fixed paraffin embedded human tonsil stained with high molecular weight Cytokeratin H.M.W and labeled with Mono AEC/Plus (K050).

### Mono AEC/Plus

IVD

**Catalog No.:** K050, 30ml Ready-to-Use  
K050-110, 110ml Ready-to-Use

Mono AEC/Plus is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). AEC produces a red colored end product, yielding strong contrast when combined with a blue hematoxylin counterstain. AEC has been well accepted among histotechnologists because it is less chemically hazardous than DAB. Specimens stained using Mono AEC/Plus cannot be dehydrated in ethanol and must be mounted in an aqueous-based mounting medium such as CC/Mount (cat. K002).



Formalin fixed paraffin embedded human adenocarcinoma stained with Cytokeratin H.M.W and labeled with PermaBlack/HRP(K062).


### PermaBlack/HRP

IVD

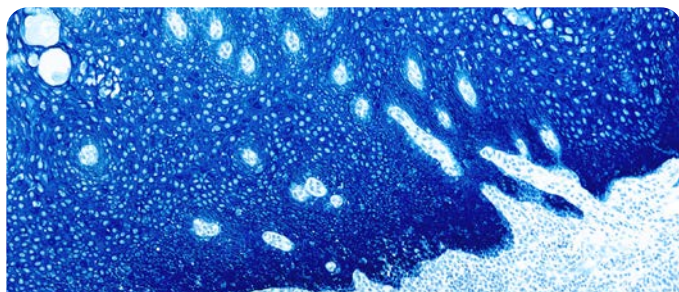
**Catalog No.:** K062, 30ml Ready-to-Use  
K062-110, 110ml Ready-to-Use

PermaBlack/HRP is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlack/HRP can be permanently mounted to produce a sharply contrasting ebony black color that can be easily distinguished from other stains.

**SITVUE™**  
Rapid Three Step DAB Detection System

**SPEED MATTERS**  
RESULT IN  **30 min**

**Three Step**

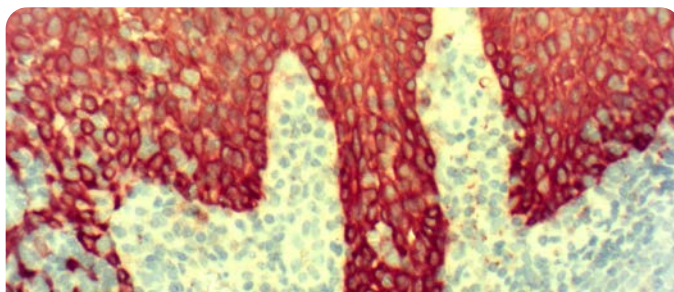


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W and labeled with PermaBlue/HRP(K063).

**PermaBlue/HRP** **IVD**

**Catalog No.:** K063, 30ml Ready-to-Use  
K063-110, 110ml Ready-to-Use

PermaBlue/HRP is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlue/HRP can be permanently mounted to produce a strong azure blue color that can be easily distinguished from other stains.

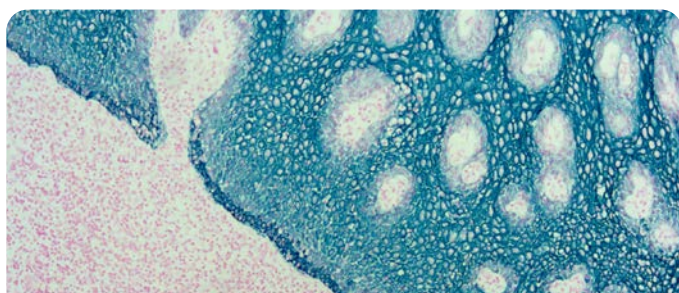


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W and labeled with PermaRed/HRP (K075).

**PermaRed/HRP** **IVD**

**Catalog No.:** K075, 30ml Ready-to-Use  
K075-110, 110ml Ready-to-Use

PermaRed/HRP is a substrate-chromogen system designed to be used for either IHC or ISH when utilizing horseradish peroxidase. PermaRed/HRP produces a distinct brick red stain that can easily be distinguished from other stains.

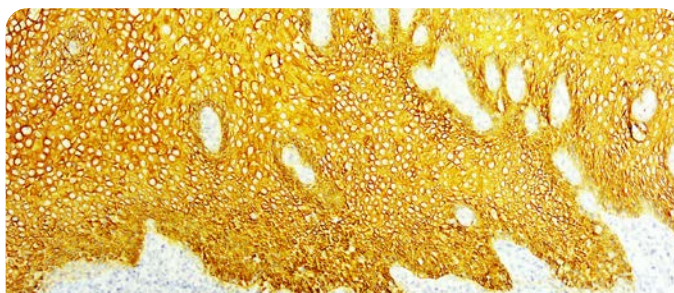


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W labeled with PermaGreen/HRP.

**PermaGreen/HRP** **IVD**

**Catalog No.:** K074, 30ml Ready-to-Use  
110ml, 110ml Ready-to-Use

PermaGreen/HRP is a substrate-chromogen system designed to be used for either IHC or ISH when utilizing horseradish peroxidase. PermaGreen/HRP produces a distinct bright green color that can easily be distinguished from other stains.



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W labeled with PermaYellow/HRP(K 060).

**PermaYellow/HRP** **IVD**

**Catalog No.:** K060, 30ml Ready-to-Use  
K060-110, 110ml Ready-to-Use

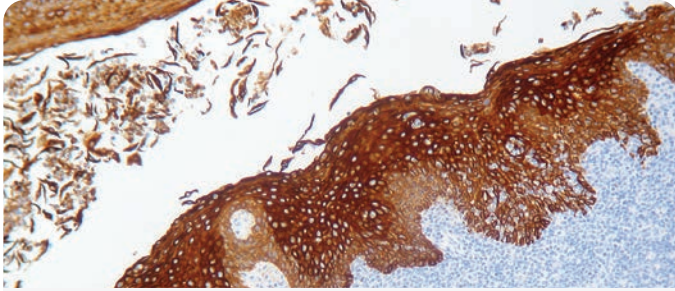
PermaYellow/HRP is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaYellow/HRP produces a distinct bright yellow that can easily be distinguished from other stains.

Chromogens



## Ancillary Reagents

Visit us at [www.dbiosys.com](http://www.dbiosys.com)



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 5/14 labeled with Stable DAB/Plus (K047).

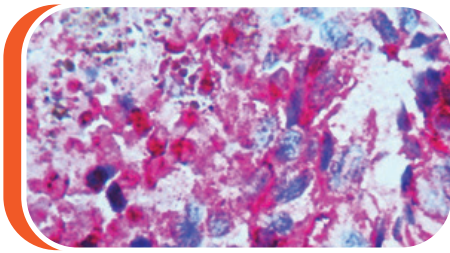
**Stable DAB/Plus** **IVD**

Catalog No.: K047, 200ml Ready-to-Use

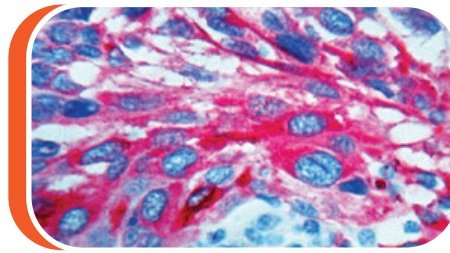
DAB, a widely used chromogen for immunoperoxidase staining, is well accepted among pathologists because of its high sensitivity and cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated, cleared, and mounted for permanent record keeping. Stable DAB/Plus is more sensitive and stable than traditional working DAB solutions, which reduces hazardous waste generation.

Chromogens

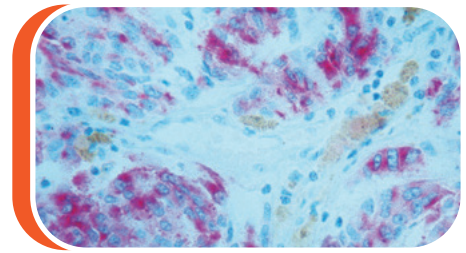
## Improving Dermatologic Diagnosis with PermaRed/AP and PermaRed/HRP



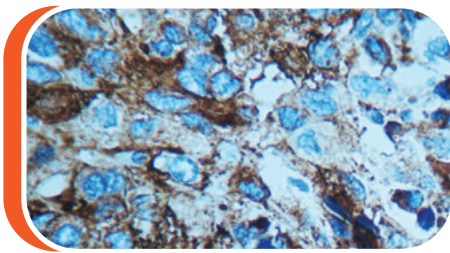
HMB45 melanoma utilizing PermaRed/AP



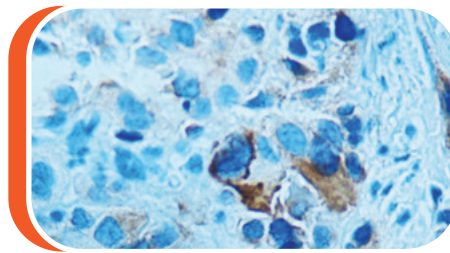
MART1 melanoma utilizing PermaRed/HRP



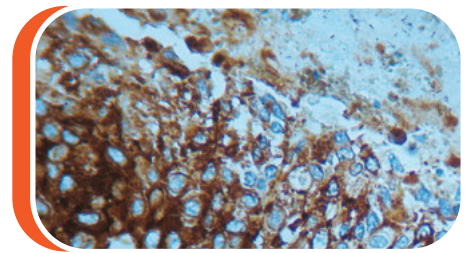
Pan Melanoma Cocktail on melanoma utilizing PermaRed/AP



HMB45 melanoma utilizing Stable DAB/Plus



MART1 melanoma utilizing Stable DAB/Plus



Pan Melanoma Cocktail on melanoma utilizing Stable DAB/Plus

# Instrumentation



# HighLighter™

## Fully Automated Slide Stainer

Fully automated instrument-HighLighter™ comes as a compact, benchtop 36 slide staining system. It performs all the steps of immunohistochemistry starting from baking to counterstaining while ensuring consistent and crisp results.

### Key Features:

- Compact, benchtop, 36-slide system
- Designed for IHC application
- Fully automated from baking to counterstain
- Consistent and crisp staining
- Real time onboard DAB mixing
- Liquid sensors for accurate reagent handling
- Liquid sensors for waste disposal to prevent overflow
- Slide QR-Code labelling and reading
- RFID reader for reagents vials, identifies, and controls reagent consumption and expiration dates



36-Slide System



Onboard Dab Mixing



RFID Reader



# Montage Opus365™

## Antigen Retrieval System

The Antigen Retrieval HIER technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue.

It is a very critical step in immunohistochemistry and the quality of staining is largely dependent on strict adherence to the antigen retrieval protocol.

Montage Opus 365™ is a compact and efficient fully digitalized platform which can process 96 slides in less than 30 minutes by using retrieval buffers of different pH in a single run with the advantage of providing the user the flexibility of setting the time and temperature according to their protocol. DBS provides 10 X 500 ml Citrate buffer and 10X 500 ml EDTA buffer along with Montage Opus 365™.

### Key Features:

- Up to 5 cycles per run with individual time and temperature settings
- Real time temperature and time monitoring
- Low reagent consumption
- Minimal reagent evaporation
- Uniform retrieval, even in over fixed tissues
- Multiple retrieval buffers in a single run
- IHC, ISH, and FISH suitability
- Add on slides in-between the cycles
- Temperature ranges from ambient to 115°C
- High throughput (96 slides in less than 30 minutes)

**MONTAGE 10X EDTA PH 8.0 AR SOLUTION**  
**MONTAGE 10X CITRATE PH 6.0 AR SOLUTION**



Antigen Retrieval Tanks



24 Slide Rack



Metal Stand

# slide master™

HUMIDITY CHAMBER 365

Diagnostic BioSystems Slide Master365™ is a compact and efficient platform that facilitates Humidity required for IHC staining. Appropriate maintenance of humidity along with flat platform is of extreme importance for consistent immunohistochemistry staining.

### Key Features:

- Ensures flat platform.
- Maintains humidity.
- Ease to rinse and avoids majority of individual slides handling during staining.
- 40 slide staining capacity.

Instrumentation



The Innovative Tissue Staining Humidity Chamber



Slotted Drain Holes Work to Maintain Humidity



Rinse in One Easy Motion

## Catalog Numbers and Consumables

### Product Catalog Numbers

Product Name	Cat. No
Highlighter™	HL-AS360
Montage Opus 365™	AR365

### HighLighter™ Consumables

Product Name	Pack Size	Cat. No
HighLighter Core Kit	72 Tests	HL72K

### Montage Opus 365™ Accessories

Product Name	QUANTITY	Cat. No
Antigen Retrieval Tank	4	AR 365 ART
24 Slide Rack	4	AR 365 SR
Metal Stand	1	AR 365 MS
Montage 10X EDTA AR Solution	1	K038-500AN
Montage 10X Citrate AR Solution	1	K035-500AN



## ImmunoHisto-Sealer™

Visit us at [www.dbiosys.com](http://www.dbiosys.com)



# Ancillary Reagents

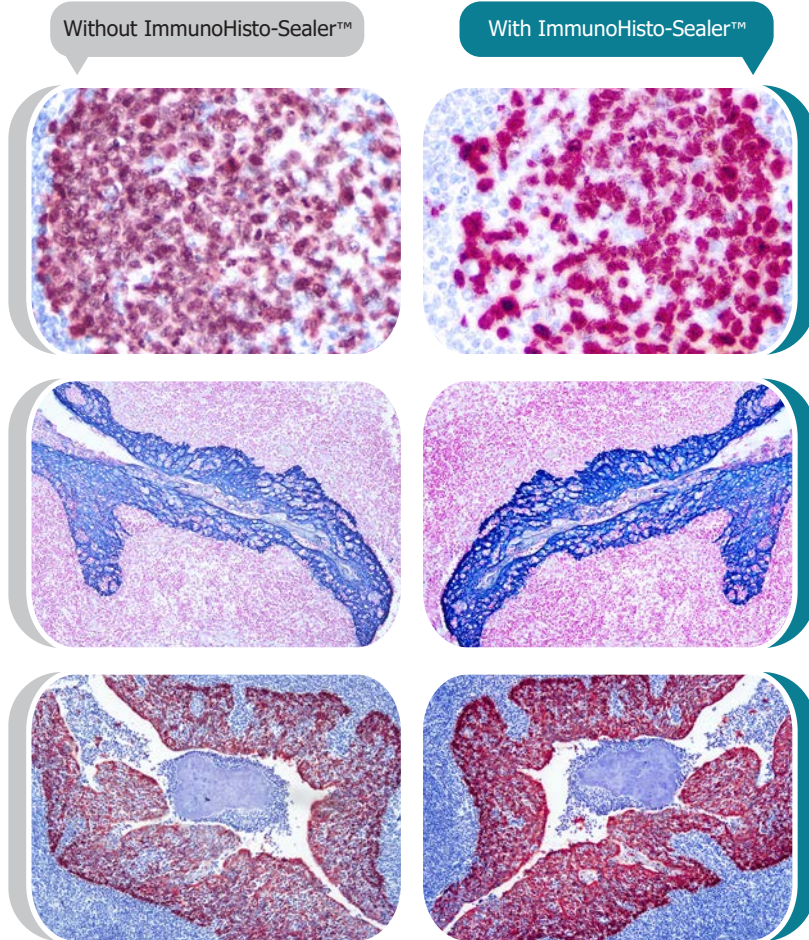


# ImmunoHisto-Sealer™

This product is designed for tissue specimens stained with peroxidase, alkaline phosphatase-based systems and various chromogens. After treating with ImmunoHisto-Sealer™, alcohol and Xylene soluble chromogens can be mounted in Permanent Mounting Media.

- ImmunoHisto-Sealer™
- For In Vitro Diagnostic Use
- Patented Technology: US 10,495,553B2

Ancillary Reagents



### Advantages of ImmunoHisto-Sealer™

- Improves the tissue morphology
- Improves your stain over an extended period
- When applied to the stained section, specimens are permanently mounted without chromogens fading
- Saves hands on time when mounting slides
- Avoids use of toxic chemicals such as xylene and eliminates accumulation of hazardous waste
- Three-year storage

### Ordering Information

Pack Size	Cat. No
30 mL	K076
200 mL	K076-200
1000 mL	K076-1000

## Ancillary Reagents

### Alkaline Phosphatase Enhancer IVD



**Catalog No.:** K011

**Pack Size:** 250ml Ready-to-Use

Alkaline phosphatase, an enzyme derived from bovine intestinal mucosa, is often used as a label for in situ hybridization and immunohistochemistry. Detection of this enzyme requires the generation of an insoluble colored reaction end product. DBS has introduced a new stable solution to increase the signal generated by alkaline phosphatase several fold.

### Broad Spectrum Negative Control IVD



**Catalog No.:** K053-06, K053-25, K053-100

**Pack Size:** 6ml Ready-to-Use  
25ml Ready-to-Use  
100ml Ready-to-Use

Negative controls are used to determine the specificity of an antibody. No staining should be observed when the primary antibody is omitted. This product is specifically designed to work with rabbit, mouse and goat antibodies. The Broad Spectrum Negative Control has been titrated to work with Polymer-based Secondary Systems in manual and automated IHC platforms.

### DAB Away Kit IVD



**Catalog No.:** K072-500AN

**Pack Size:** 500ml

Montage DAB Away removes diaminobenzidine (DAB) stains and precipitate from surfaces. Contamination with DAB residue can be a problem that may affect staining quality or automated immunohistochemistry stainers. Bleach will only reduce the color intensity of DAB stains, whereas, DAB Away removes the residual DAB stain that may clog instrument probes and tubing. This kit can also be used to clean glassware used in the lab that has been exposed to DAB and has retained DAB stains even after normal cleaning.

### DAPI IVD



**Catalog No.:** K108

**Pack Size:** 1ml

DAPI or 4',6-diamidino-2-phenylindole, is a fluorescent stain that binds strongly to adenine-thymine-rich regions in DNA. It is used extensively in fluorescence microscopy. As DAPI can pass through an intact cell membrane, it can be used to stain both live and fixed cells.

### DP3 for One-Step Deparaffinization IVD



**Catalog No.:** K082

**Pack Size:** 500ml

The DP3 reagent is used for deparaffinization of paraffin-embedded tissue sections. Deparaffinization is completed in a single step without the use of xylene or alcohol. After deparaffinization the tissue sections can be transferred directly into antigen retrieval solution.

### Elite PAP Pen IVD



**Catalog No.:** K039, 1 Pen Each

Elite PAP pen is a special marking pen that provides a thin film-like green-tinting hydrophobic barrier when a circle is drawn around a specimen on a slide. This water repellent barrier keeps staining reagents localized on the tissue sections, prevents mixing of reagents when differentially staining two sections on the same slide, and allows use of less reagents per section. Insoluble in alcohol and acetone, PAP Pen markings can be optionally removed with xylene after the staining procedure is complete.

## Elite Mini PAP Pen

IVD

Catalog No.: K042, 1 Pen Each



Elite Mini PAP pen is a special marking pen that provides a thin film-like green-tinged hydrophobic barrier when a circle is drawn around a specimen on a slide. This water repellent barrier allows use of less reagents per section. Insoluble in alcohol and acetone, PAP Pen markings can be optionally removed with xylene after the staining procedure is complete. The Mini PAP pen is especially useful when working with multiple sections on a single slide because its tip is finer than the regular PAP pen.

## FITC Diluent

IVD

Catalog No.: FD001

Pack Size: 100ml Ready-to-Use



This product can be used as a diluent to prepare primary antibodies conjugated to FITC. It can be used with any primary antibody irrespective of its source of origin. FITC Diluent is specifically designed to stabilize primary antibodies and reduce nonspecific background staining observed during immunostaining.

## Hematoxylin

IVD

Catalog No.: K056-100AN

Pack Size: 100ml



Hematoxylin is a histological staining reagent suitable for visualization of nuclei in tissue sections.

## Purple Hematoxylin for IHC

IVD

Catalog No.: K095

Pack Size: 100ml



DBS's Purple Hematoxylin is intended for use in the histologic demonstration of nuclear staining. This staining technique is used to make the critical distinction between a normal nucleus and an abnormal one. With Mohs HRP-Green kit, purple hematoxylin provides better contrast and cellular morphology than traditional hematoxylin counterstains.

## Blue Hematoxylin Kit

IVD

Catalog No.: K100

Pack Size: 100ml



Hematoxylin is a histological staining reagent suitable for visualization of nuclei in tissue sections. Blue Hematoxylin, is a blue nuclear counterstain. Bluing Reagent is used following Counterstaining, both designed for optimal performance when used in immunohistochemistry.

## Primary Antibody Diluent

IVD

(With Background Reducing Component)

Catalog No.: K004

Pack Size: 250ml Ready-to-Use



The Primary Antibody Diluent contains optimal concentrations of sodium chloride and detergents to prevent nonspecific binding and enable better penetration of primary antibodies. Primary Antibody Diluent is specifically designed for diluting primary antibodies for immunohistochemistry. Both, monoclonal and polyclonal antibodies can be diluted in this buffer.

## TissueBond™ Reagent

IVD

Catalog No.: K013

Pack Size: 7ml Ready-to-Use



Proper tissue adhesion to the glass slides is critical in the immunostaining process. Improper adhesion of tissue sections can lead to poor quality staining or even loss of tissue sections during the process of immunostaining. White glue, albumen, chrome-gelatin and poly-L-lysine have been used as tissue adhesives; however, they can increase the background during the staining process. Since epitope recovery may require harsh treatment with proteolytic enzymes, microwave treatment or treatment with saponin etc., there is a need for a tissue adhesive which can irreversibly bind tissue sections to the glass without creating any background. Glass treated with TissueBond can be used for both paraffin as well as frozen tissue sections.



**Twween 20****IVD****Catalog No.:** K067-125AN**Pack Size:** 125ml

Twween 20 is a detergent (surfactant) commonly added to buffers and reagents for immunohistochemistry. Its purpose is to decrease background staining and enhance reagent spreading in automated and manual procedures.

**Background Blocker****IVD****Catalog No.:** K023**Pack Size:** 100ml Ready-to-Use

Background Blocker is a unique serum-free blocking solution used to reduce nonspecific background during immunostaining techniques. Background Blocker is a universal blocking agent, eliminating the need for matching species with the link antibody. This blocking reagent has been shown to be superior to serum-based blocking solutions. Background Blocker can be used for ELISA and Western blotting techniques as well as immunohistochemistry.

**Mouse on Mouse Blocking Reagent****IVD****Catalog No.:** K065**Pack Size:** 10ml

Mouse on Mouse (MOM) Blocking Reagent is a unique serum-free blocking solution used to reduce nonspecific background staining from mouse antibodies. This blocking reagent has been shown to be more superior than serum-based blocking solutions.

**Peroxidase Block****IVD****Catalog No.:** K033**Pack Size:** 50ml Ready-to-Use

Endogenous peroxidase activity has been observed in tissue sections during immunoperoxidase staining. If not properly suppressed, endogenous peroxidase can produce false signal as well as high background during the immunostaining. Treatment of tissue sections with Peroxidase Block prior to the application of primary antibody will suppress endogenous peroxidase activity.

**Tissue Primer****IVD****Catalog No.:** K054**Pack Size:** 100ml

Tissue Primer is a universal enzyme blocking reagent to use in horse radish peroxidase (HRP) and alkaline phosphatase (AP) based immunohistochemical staining procedures done on paraffin tissue sections, frozen tissue sections and cell smears to suppress nonspecific staining due to endogenous enzyme activity.

**Rapid Histo-Sealer (10X)<sup>TM</sup>****IVD****Catalog No.:** K093**Pack Size:** 10 ml Ready-to-Use,  
5ml Ready-to-Use

Rapid Histo-Sealer<sup>TM</sup> is a preservation solution that acts to rapidly dehydrate tissues mounted on microscope slides in preparation for permanent mounting. This quick-acting dehydrating solution is ideal for rapid immunohistochemistry procedures such as Mohs micrographic surgery.

**Tissue Glue****IVD****Catalog No.:** K096**Pack Size:** 50+50 ml

This product is designed for use with both frozen tissue sections and paraffin-embedded tissue sections for adhering the tissues firmly onto a glass microscope slide.

## Buffers

### 10X Immuno Wash Buffer IVD



**Catalog No.:** K005  
**Pack Size:** 1 Liter Concentrated

10X Immuno Wash Buffer works well for manual and automated immunohistochemistry applications as well as other laboratory procedures requiring a high quality TBS buffer with superior pH stability. The TBS contains surfactant and allows for reagents to spread more uniformly across tissue section on slides. It can also be used on an automated staining system.

### 40X Immuno Wash Buffer IVD



**Catalog No.:** K080  
**Pack Size:** 250 ml Concentrated

40X Immuno Wash Buffer washes and removes excess reagents during immunostaining. It works well for manual and automated immunohistochemistry applications as well as other laboratory procedures requiring a high quality TBS buffer with superior pH stability. The TBS contains surfactant and allows for reagents to spread more uniformly across tissue section on slides.

## Chromogen Enhancers

### 20X DAB Enhancer IVD



**Catalog No.:** K012  
**Pack Size:** 10ml Concentrated

DAB is a widely used chromogen for immunoperoxidase staining and immunoblotting. DAB gives cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated in ethanol and cleared in xylene and can be mounted for permanent record keeping. Strength of signal generated during the immunostaining is the key to a good staining. The reagent is a stable liquid solution which increases the staining intensity of specimens stained with DAB several-fold, thereby increasing the efficiency of detection.

### ImmunoHisto-Sealer™ IVD



**Catalog No.:** K076  
**Pack Size:** 30ml

ImmunoHisto-Sealer™ is a preservation solution that acts as a sealant to improve tissue morphology and stain over an extended period of time. When applied to the stained section, specimens can be permanently mounted without chromogens fading. Additional benefits of the ImmunoHisto-Sealer™ include: saves hands on time when mounting slides, avoids the use of toxic chemicals such as xylene and eliminates accumulation of hazardous waste.

### Intensi/Fire IVD



**Catalog No.:** K045  
**Pack Size:** 15ml Ready-to-Use

One of the hallmarks of successful IHC is the strength of the signal generated during immunostaining. DAB, widely used as a chromogen for immunoperoxidase staining, has been well accepted by pathologists due to its superior performance compared to amino ethylcarbazole (AEC). Tissue specimens stained with DAB show increased staining intensity when Intensi/Fire is applied. Only a brief incubation is required. Increased sensitivity of the detection system allows the cost-effective option of diluting the primary antibody 5 to 10 fold. Intensi/Fire increases the signal intensity without creating background staining.

# POLYVIEW™

Two Step DAB Detection System

**Two Step**



## Mounting Media

### CC/Mount™ (Aqueous Permanent Mounting Medium) IVD



**Catalog No.:** K002, K002-200

**Pack Size:** 30 ml Ready-to-Use, 200ml Ready-to-Use

CC/Mount is an aqueous mounting medium with a high refractive index. When applied to stained tissue sections, specimens can be permanently mounted without chromogens fading. The advantages of CC/Mount include: no coverslip, no exposure to organic fumes, permanent storage of slides and high resolution of tissue specimens. CC/Mount is compatible with chromogens like AEC, DAB, Fast Red, BCIP/NBT, BCIP/INT and fluorescent dyes like FITC and phycobiliproteins. The high pH ensures increased stability of fluorescence.

### Fluoromount™ IVD



**Catalog No.:** K024, K024-200

**Pack Size:** 25ml Ready-to-Use, 200ml Ready-to-Use

Fluoromount is an innovative, aqueous-based mounting medium designed especially for the permanent preservation of fluorescent specimens. Fluoromount is to be used with tissue sections stained with a multitude of fluorescent dyes. This product is compatible with FITC, phycoerythrin, phycocyanin and allophycocyanin. It can also be used with other fluorescent markers such as Texas Red and rhodamine.

### Fluoromount/Plus™ IVD



**Catalog No.:** K048

**Pack Size:** 25ml Ready-to-Use

Fluoromount/Plus is an innovative, aqueous-based mounting medium designed especially for the permanent preservation of fluorescent specimens. Fluoromount/Plus is to be used with tissue sections stained with a multitude of fluorescent dyes. This product is compatible with FITC, phycoerythrin, phycocyanin and allophycocyanin. It can also be used with other fluorescent markers such as Texas Red and rhodamine.

### Nuclear Fast Red for IHC IVD



**Catalog No.:** K098

**Pack Size:** 100ml

DBS's Nuclear Fast Red is intended for use in the histologic demonstration of nuclear staining. This staining technique is used to make the critical distinction between a normal nucleus and an abnormal one. When used as a counterstain in immunohistochemical procedures, Nuclear Fast Red is compatible with most commonly used chromogens including DBS HRP-Yellow, HRP-Green, HRP-Black, and DAB. Nuclear Fast Red is particularly useful with blue chromogens, such as DBS HRP-Blue.

Ancillary Reagents

Montage

Opus365™

Antigen Retrieval System

Visit us at [www.dbiosys.com](http://www.dbiosys.com)



MONTAGE 10X EDTA PH 8.0 AR SOLUTION  
MONTAGE 10X CITRATE PH 6.0 AR SOLUTION





# Special Stains



# Special Stains

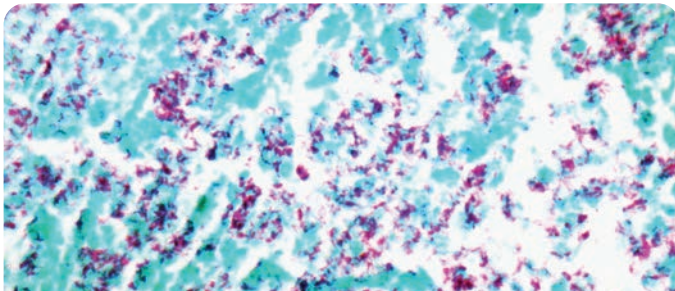
Histology is the study and analysis of structure and function in biological tissues and cells. Specially formulated dyes and chemicals are used to give color to cellular tissue components for microscopic examination. Through this process diagnostic evaluations are made and patient therapies are determined.

Diagnostic BioSystems offers Special Stains ranging from Acid-Fast Bacteria Stain Kit to Warthin-Starry Stain Kit. The reagents are packaged for optimal staining quality and are designed to be used right of the box for minimal set up time.

Each Diagnostic BioSystems Special Stain Kit has been quality assured and comes with complete instructions for use.

**Format and Pack Size: Each kit has sufficient reagents for 100 tests.**

Special Stains

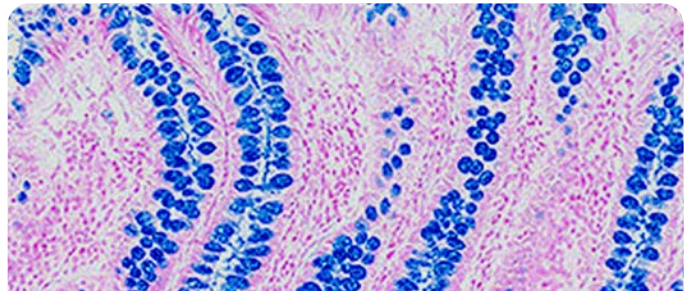


Acid Fast Bacilli Lung infected with Acid Fast Bacteria (A.F.B) (KT001).

**A.F.B** **IVD**

**Catalog No.:** KT001

This kit stains acid-fast bacteria and tubercle bacilli of Mycobacterium genus in paraffin tissue sections. Tubercle bacilli and other acid-fast bacteria stain bright red and the background stains light green.

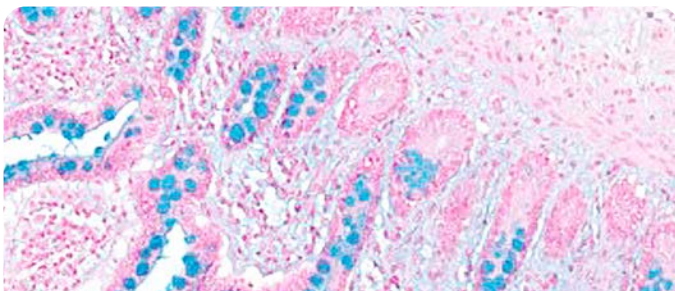


Human Colon Stained with Alcian Blue (KT003).

**Alcian Blue, pH 2.5** **IVD**

**Catalog No.:** KT003

This kit stains acid mucins, carboxylated and sulfated mucosubstances (except strongly sulfated mucosubstances) in paraffin tissue sections. Acidic mucins, carboxylated and sulfated mucosubstances stain blue, while the nuclei stain pink to red and the cytoplasm and background stain pale pink.

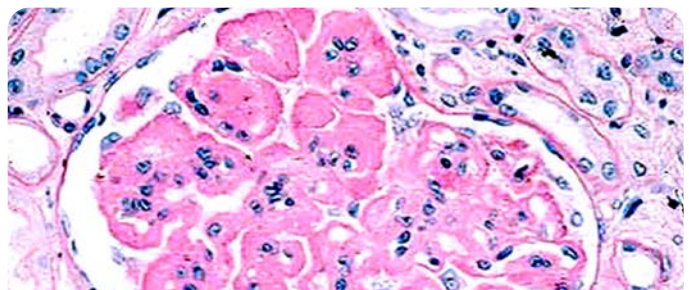


Human colon stained with Alcian Blue (KT002).

**Alcian Blue, pH 1.0** **IVD**

**Catalog No.:** KT002

This kit stains strongly sulfated mucosubstances. Strongly sulfated mucosubstances stain blue in paraffin tissue sections, while the nuclei stain pink to red and the cytoplasm and background stain pale pink.

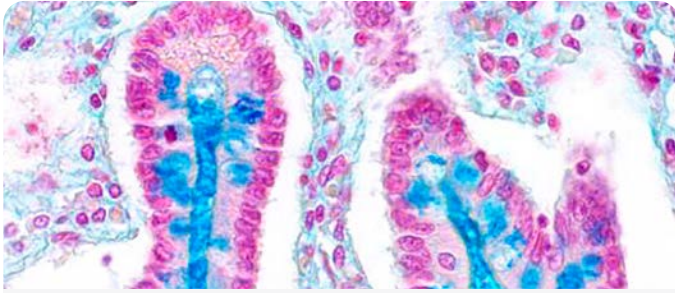


Amyloidosis in Kidney stained with AMY-1 Kit (KT008).

**Amyloid** **IVD**

**Catalog No.:** KT008

This kit stains amyloid deposits in paraffin tissue sections. The amyloids stain pale pink to red, while the nuclei stain blue.



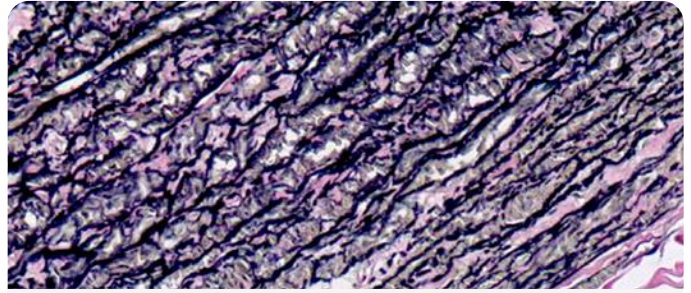
Human intestine stained with Colloidal Iron stain (KT007).

**Colloidal Iron**

IVD

Catalog No.: KT007

This kit stains acid mucopolysaccharides in paraffin tissue sections. The acid mucopolysaccharides stain bright blue, while collagen stains shades of red.



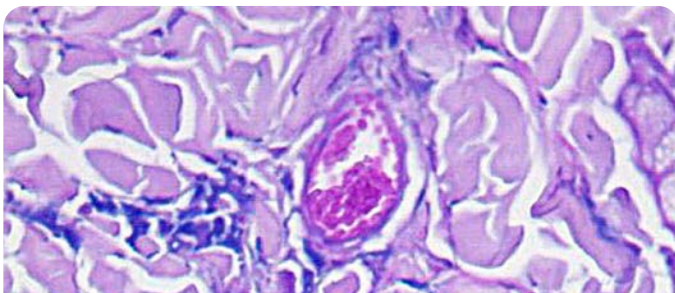
Human uterus stained with elastic stain (KT012).

**Elastic**

IVD

Catalog No.: KT012

This kit stains elastic fibers in paraffin tissue sections. The elastic fibers stain black and collagen stains red, while the other tissue stains yellow.



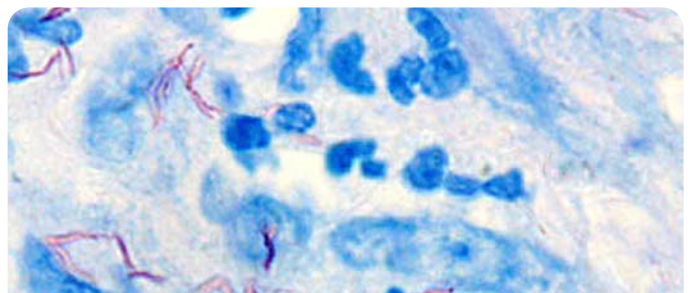
Combined Eosinophil-Mast Cell (KT004).

**Combined Eosinophil-Mast Cell**

IVD

Catalog No.: KT004

This kit stains eosinophils and mast cells imultaneously in paraffin tissue sections. Mast cells stain bright blue, while eosinophils stain bright red.



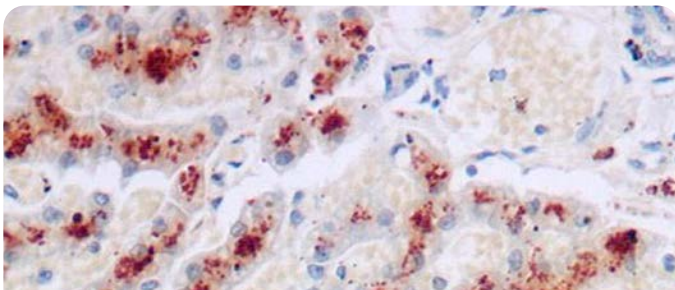
Human lung stained with Fite kit (KT013).

**Fite**

IVD

Catalog No.: KT013

This kit stains Lepra bacillus in paraffin tissue sections. The Lepra bacillus stains red, while the background stains blue.



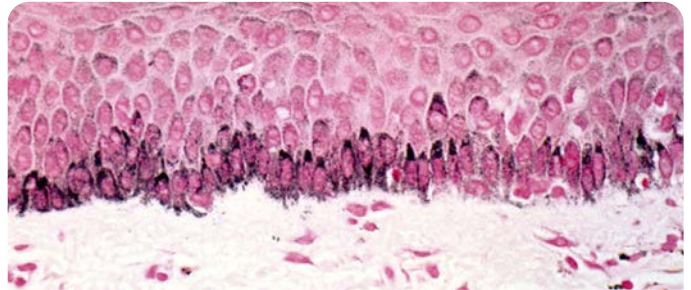
Copper Stain on copper deposits in Liver (KT033).

**Copper**

IVD

Catalog No.: KT033

This kit stains copper deposits in paraffin tissue sections. The copper deposits stain light brown to red, while the nuclei stain blue.



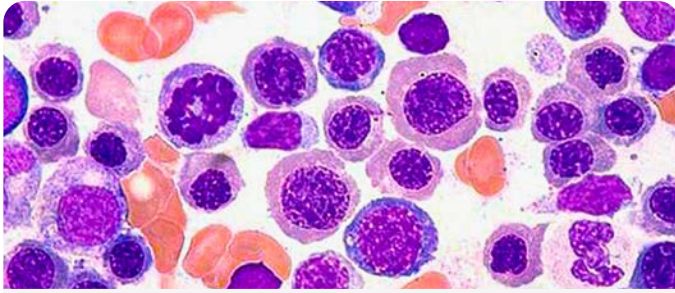
Human Melanoma stained with Fontana Mason Stain (KT014).

**Fontana-Masson**

IVD

Catalog No.: KT014

This kit stains argentaffin cells and melanin in paraffin tissue sections. The argentaffin cells and melanin granules stain brown to black, while the nuclei stain pink.

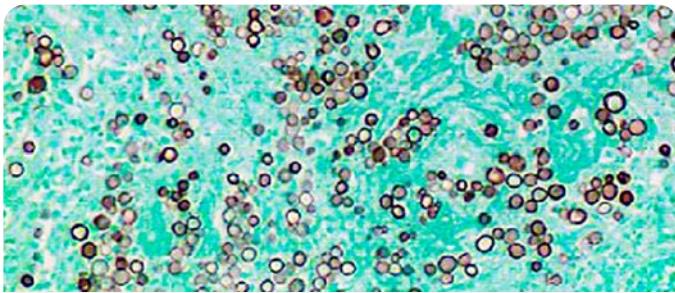


Human bone marrow stained with Giemsa kit (KT016).

**IVD**  
Giemsa

Catalog No.: KT016

This kit stains bone marrow cells, Helicobacter pylori, mast cells and certain microorganism in paraffin tissue sections. The erythrocytes stain grey, yellow or pink, H. pylori stain blue, mast cells stain dark blue with red granules, nuclei stain blue to violet and the cytoplasm stains light blue.

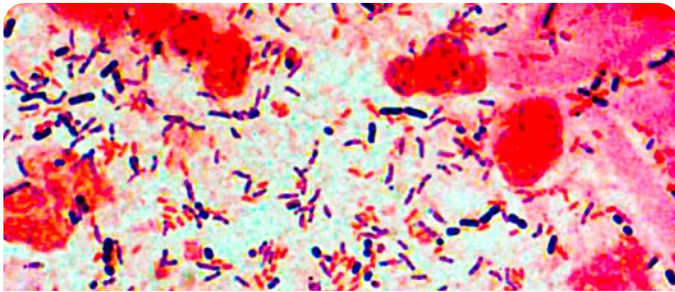


Human lung stained with G.M.S. kit (KT015).

**IVD**  
G.M.S

Catalog No.: KT015

This kit stains fungi and Pneumocystis carinii in paraffin tissue sections. The fungi and Pneumocystis carinii stain grey to black, while the background stains green.

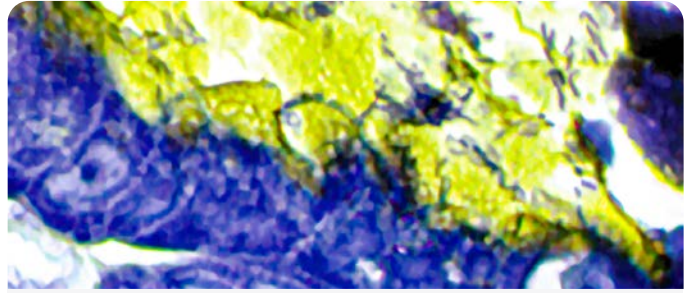


Gram positive and gram negative bacteria stained with Gram stain (KT018).

**IVD**  
Gram Stain Kit

Catalog No.: KT018

This kit stains Gram-positive and Gram-negative bacteria in paraffin tissue sections. The Gram-positive bacteria stain blue, Gram-negative bacteria stain red, while other tissues and the nuclei stain yellow and red respectively.

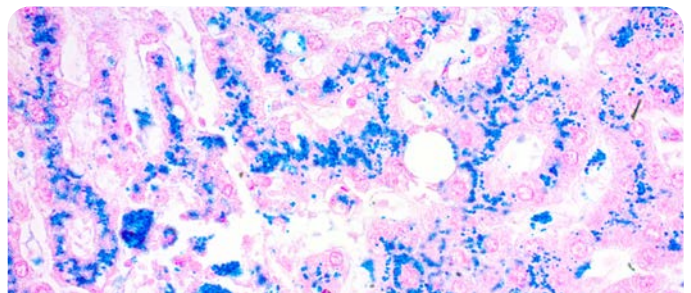


Human stomach stained with H. Pylori Rapid Stain (KT019).

**IVD**  
H. Pylori Rapid Stain

Catalog No.: KT019

This kit stains Helicobacter pylori bacteria in paraffin tissue sections. The Helicobacter pylori stain blue while the background stains pale blue.

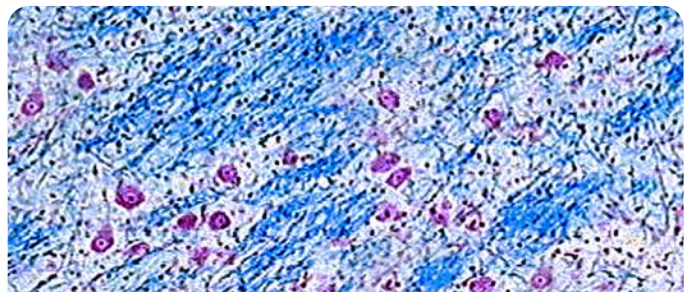


Iron Deposits in Liver Stained with Iron Stain (KT021).

**IVD**  
Iron Stain

Catalog No.: KT021

This kit stains ferric iron in paraffin tissue sections. The iron deposits stain blue, while the nuclei and other tissue stain red and pink respectively.



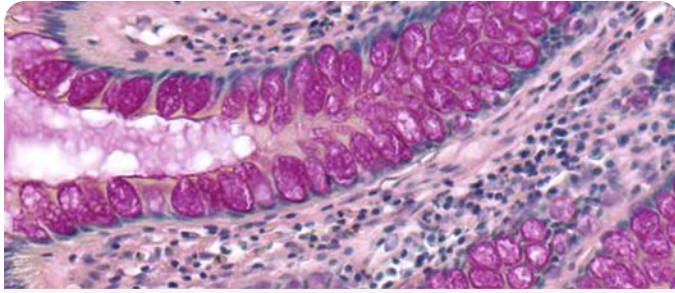
Luxol Fast Blue stain on brain (KT022).

**IVD**  
Luxol Fast Blue

Catalog No.: KT022

This kit stains myelin sheath and Nissl substance in paraffin tissue sections. The myelin fibers stain blue to greenish blue, while the cells stain pink to violet.



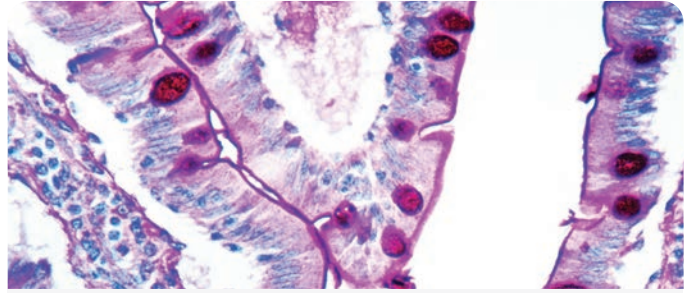


Human colon tumor stained with Mucicarmine kit (KT024).

**Mucicarmine** IVD

Catalog No.: KT024

This kit stains epithelial mucins in paraffin tissue sections. The epithelial mucin stains pink to red, while the nuclei stain blue.

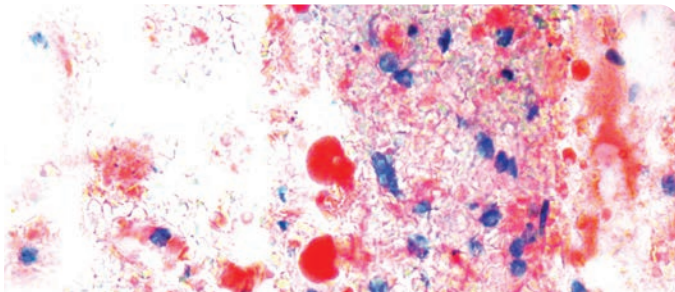


Human intestine stained with PAS stain (KT027).

**P.A.S.** IVD

Catalog No.: KT027

This kit stains fungi, glycogen and mucin in paraffin tissue sections. The basement membrane, fungi, glycogen and mucin stain pink to red, while the nuclei and other tissue stain blue and green respectively.

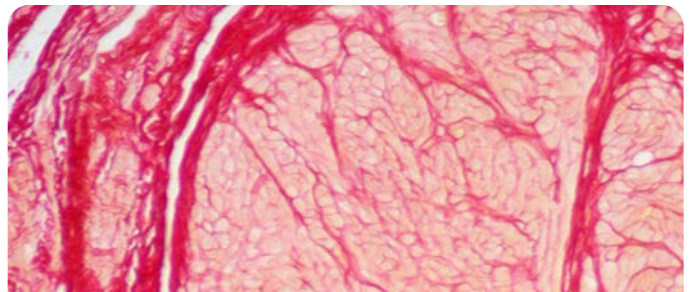


Frozen breast tissue stained with Oil Red O (KT025).

**Oil Red O** IVD

Catalog No.: KT025

This kit stains fat cells and neutral fat in frozen tissue sections. The fat cells and neutral fat stains red, while the nuclei stain blue.

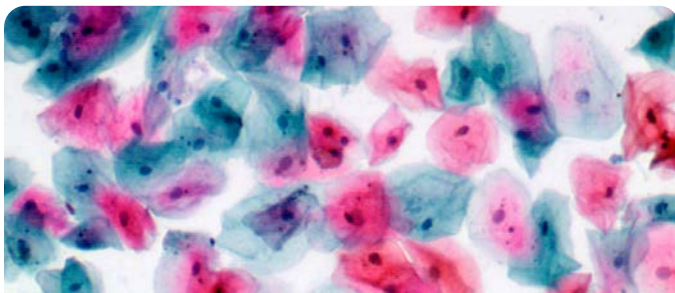


Human uterus stained with Picro Sirius Red (KT037).

**Picro Sirius Red Stain** IVD

Catalog No.: KT037

The Picro-Sirius Red Stain Kit (For Collagen) is intended for use in the histological visualization of collagen I and III fibers in addition to muscle in tissue sections.

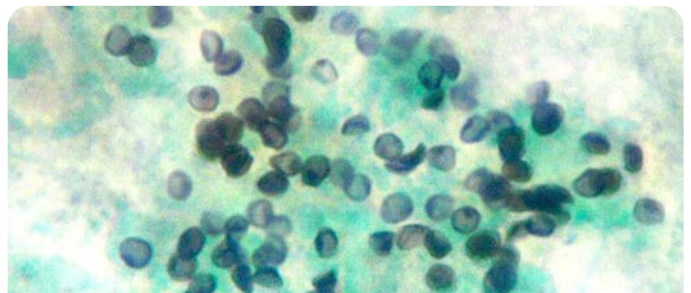


Human Cervical smear stained with PAP stain (KT038).

**Papanicolaou Stain** IVD

Catalog No.: KT038

The Papanicolaou (PAP) Stain Kit is designed to differentiate between a variety of cells in vaginal smears for detection of vaginal, uterine and cervical cancer.

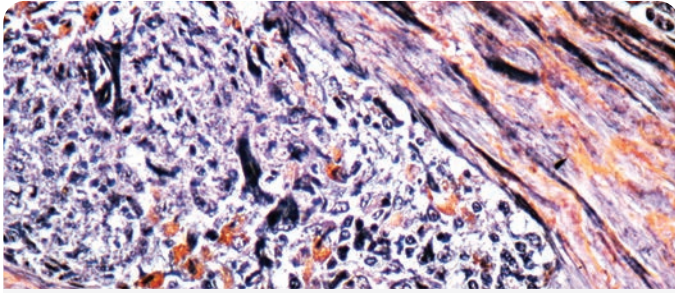


Pneumocystis Stain Kit on pneumocystis in Lung (KT030).

**Pneumocystis** IVD

Catalog No.: KT030

This kit stains Pneumocystis carinii in cytology smears as well as paraffin tissue sections. The Pneumocystis carinii stains violet to purple and the connective tissue stains blue to green.



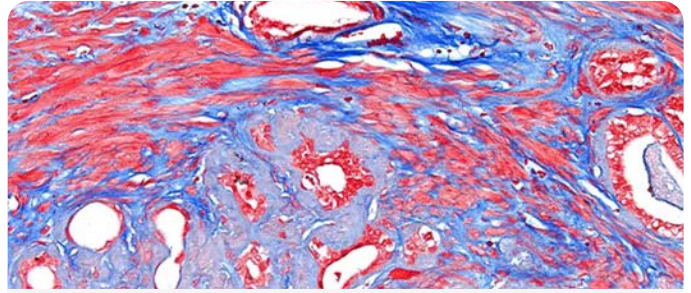
PTAH Stain on Uterus (KT029).

**P.T.A.H.**

**IVD**

**Catalog No.:** KT029

This kit stains collagen, fibrin and striated muscle in paraffin tissue sections. The collagen stains brownish red to red, fibrin and muscle stain blue, while the nuclei stain dark blue.



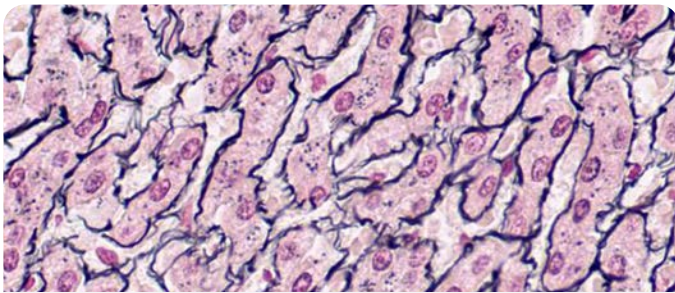
Massons Trichrome Stain on Lung Tissue (KT034).

**Trichrome Stain**

**IVD**

**Catalog No.:** KT034

This kit stains collagen and muscle in paraffin tissue sections. The muscle and intercellular fibers stain red, while the nuclei and collagen stain black and blue respectively.



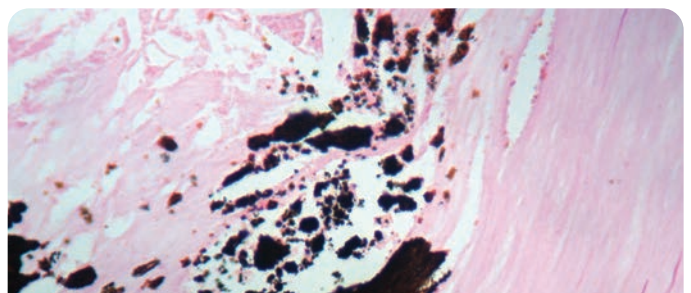
Human liver stained with reticulum stain (KT031).

**Reticulum**

**IVD**

**Catalog No.:** KT031

This kit stains reticulum fibers in paraffin tissue sections. The reticulum fibers stain gray to black, while the nuclei and background stain pink to rose.



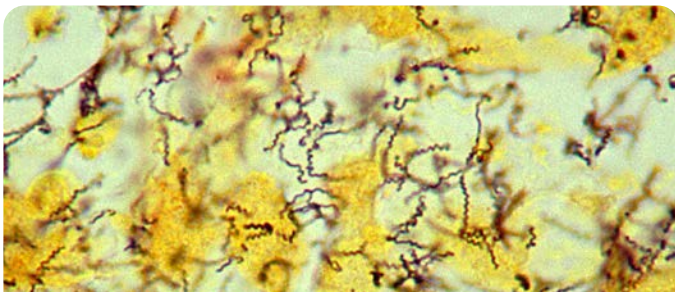
Bone tissue stained with Von Kossa stain (KT028).

**Von Kossa**

**IVD**

**Catalog No.:** KT028

This kit stains calcium deposits in paraffin tissue sections. The calcium deposits stain black, while the nuclei and cytoplasm stain red and pink respectively.



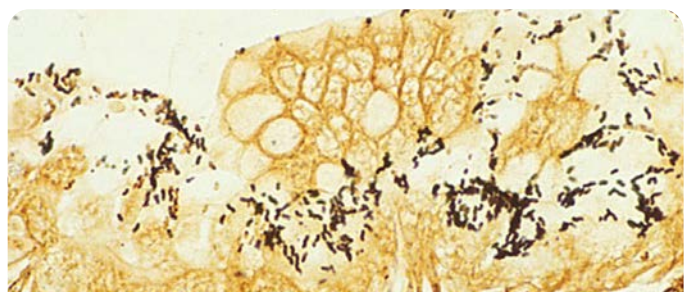
Human breast stained with Steiner kit (KT035) showing Treponema pallidum staining.

**Steiner**

**IVD**

**Catalog No.:** KT035

This kit stains fungi, Helicobacter pylori, Legionella pneumophila and Spirochetes in paraffin tissue sections. The cat scratch fever, Legionella pneumophila stain dark brown, Spirochetes, Helicobacter pylori and fungi stain black, while the background stains yellow, tan or brown.



Human Gastric tissue stained with Warthin Starry kit (KT036).

**Warthin-Starry**

**IVD**

**Catalog No.:** KT036

This kit stains Helicobacter pylori, Spirochetes, Legionella pneumophila and cat scratch fever bacteria in paraffin tissue sections. Helicobacter pylori, Legionella pneumophila stain dark brown, while Spirochetes and cat scratch fever bacteria stain black.

  
**HRP**  
**DAB**  
Detection Systems

**One**  
STEP

**UNOVUE™**  
One Step DAB Detection System



**Two**  
STEP

**POLYVUE™**  
Two Step DAB Detection System



**Three**  
STEP

**SITVUE™**  
Rapid Three Step DAB Detection System





# Antigen Retrieval Solutions

# Antigen Retrieval Solutions

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high. Epitope retrieval techniques fall into two main categories, enzyme induced epitope recovery and heat induced epitope recovery.

Diagnostic BioSystems offers products for both enzyme and heat induced epitope retrieval.

Antigen Retrieval Solutions

## 10X Antigen Retrieval Buffer High, pH 10.0 IVD



**Catalog No.:** K044  
**Pack Size:** 500ml Concentrated

10X Antigen Retrieval Buffer High, pH 10.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Citrate Buffer for Heat Induced Epitope Recovery, pH 7.0 IVD



**Catalog No.:** K036  
**Pack Size:** 500ml Concentrated

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 7.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Citrate Buffer for Heat Induced Epitope Recovery, pH 6.0 IVD



**Catalog No.:** K035  
**Pack Size:** 500ml Concentrated

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 6.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Citrate Buffer for Heat Induced Epitope Recovery, pH 8.0 IVD



**Catalog No.:** K037  
**Pack Size:** 500ml Concentrated

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 8.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

**10X EDTA Buffer for Heat Induced Epitope Recovery, pH 8.0**

IVD

**Catalog No.:** K038**Pack Size:** 500ml Concentrated

10X EDTA Buffer For Heat Induced Epitope Recovery, pH 8.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

**10X Tris-EDTA Buffer For Heat Induced Epitope Recovery, pH 9.0**

IVD

**Catalog No.:** K043**Pack Size:** 500ml Concentrated

10X Tris-EDTA Buffer For Heat Induced Epitope Recovery, pH 9.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

**HistoZyme**

IVD

**Catalog No.:** K046, K046-50**Pack Size:** 15ml Ready-to-Use,  
50ml Ready-to-Use

HistoZyme is a proteolytic enzyme solution that results in superior staining over traditionally used enzyme pretreatments, such as pepsin and trypsin. HistoZyme requires only a brief incubation at room temperature. Performing antigen recovery with HistoZyme, will allow you to dilute the primary antibody 5 to 10 fold further and achieve optimal staining.

**Pepsin Solution**

IVD

**Catalog No.:** K009**Pack Size:** 50ml Ready-to-Use

Pepsin is used for proteolytic digestion of formalin-fixed paraffin-embedded (FFPE) tissue sections prior to application of antibodies. In immunohistochemistry (IHC), most commonly used fixatives such as formalin, mask tissue antigens (cellular, membrane, and nuclear) by their intrinsic cross-linking. This masking results in poor or no staining in IHC. Pepsin digestion of FFPE tissue sections improves accessibility of antibodies to tissue antigens.

**Proteinase K 25X**

IVD

**Catalog No.:** K030**Pack Size:** 2ml Concentrated

Proteinase K is specifically formulated to achieve proteolytic digestion of formalin fixed, paraffin embedded tissue sections prior to performing in situ hybridization procedures.

**QuatroSol I 10X Citrate Buffer**

IVD

**Catalog No.:** K085**Pack Size:** 500ml Concentrated

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high.

Buffer performs four steps:

1. Deparaffinization
2. Rehydration
3. Antigen retrieval
4. Blocks endogenous peroxidase and alkaline phosphatase simultaneously it can eliminate the use of alcohol and xylene in deparaffinization process. It is cost effective and less hazardous.

**QuatroSol II 10X Tris EDTA Buffer** **IVD**



**Catalog No.:** K086

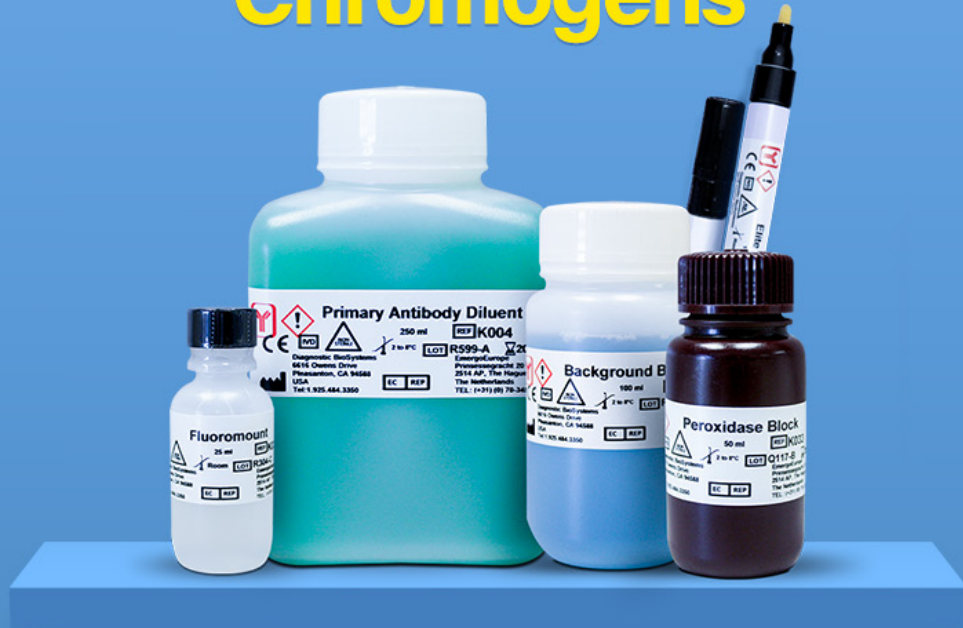
**Pack Size:** 500ml Concentrated

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high.

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# Ancillaries & Chromogens





# Montage Opus365™

## Antigen Retrieval System

The Antigen Retrieval HIER technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue.

It is a very critical step in immunohistochemistry and the quality of staining is largely dependent on strict adherence to the antigen retrieval protocol.

Montage Opus 365™ is a compact and efficient fully digitalized platform which can process 96 slides in less than 30 minutes by using retrieval buffers of different pH in a single run with the advantage of providing the user the flexibility of setting the time and temperature according to their protocol. DBS provides 10 X 500 ml Citrate buffer and 10X 500 ml EDTA buffer along with Montage Opus 365™.

### Key Features:

- Upto 5 cycles per run with individual time and temperature settings
- Real time temperature and time monitoring
- Low reagent consumption
- Minimal reagent evaporation
- Uniform retrieval, even in over fixed tissues
- Multiple retrieval buffers in a single run
- IHC, ISH, and FISH suitability
- Add on slides in-between the cycles
- Temperature ranges from ambient to 115°C
- High throughput (96 slides in less than 30 minutes)



MONTAGE 10X EDTA PH 8.0 AR SOLUTION  
MONTAGE 10X CITRATE PH 6.0 AR SOLUTION



Antigen Retrieval Tanks



24 Slide Rack



Metal Stand



## Ordering Information

### Orders:

Orders will be accepted via phone, fax, mail, or e-mail.

Toll Free: (888) 896-3350 Select option 1 for Customer Service

Fax: (925) 484-3390

E-mail: orders@dbiosys.com

### Confirming Orders:

To avoid duplicates of your shipment, if a confirmation is sent by e-mail, please clearly mark, "Confirming Order."

### Payment Sources:

Diagnostic BioSystems accepts Visa, Mastercard and American Express. Clients with approved credit can also pay with wire transfer or check.

### WE PROUDLY ACCEPT



### Terms:

Net 30 days upon approval. Overdue accounts are subject to a finance charge of 1.5% per month.

### Prices:

Prices are in US Dollars. All payments are to be made in US dollars. Prices are available on request.

### Freight:

FOB is Pleasanton, CA. Shipping charges will be prepaid and added to invoice.

### Returns:

Products shipped on customer's order will be considered as final sales. If you need to return an item, please call DBS within five working days after receipt of the product for a Return Authorization Number. No credit or exchange will be permitted without prior authorization. Credit or returns for products will be authorized when product performance does not meet the quality stated or products were shipped in error. Product liability limited to refund or replacements only.

### Technical Information

For technical assistance, please call or fax our technical staff:

Attention: Diagnostic BioSystems Technical Services

Toll Free: (888) 896-3350 Select option 2 for Technical Support

Fax: (925) 484-3390

E-mail: techsupport@dbiosys.com

## About Us

Since 1994, Diagnostic BioSystems Inc. is committed to enhancing immunohistochemistry results by providing innovative anatomic pathology reagents and systems to improve the practice of pathology. Since the inception, our prime focus has been to provide high quality products and exceptional customer service and support.

Diagnostic BioSystems provides cutting-edge in-vitro diagnostics to the anatomic pathology and histology market through direct sales in the domestic market and through international distributors to over 60 countries worldwide. Our product portfolio includes high quality primary and fluorescent antibodies (FITC conjugated), autostainer, chromogens, detection kits and a wide range of ancillaries.

Diagnostic BioSystems is an ISO 13485:2016 certified cGMP compliant, medical device manufacturer.



**HighLighter™**  
Fully Automated Slide Stainer



**MontageOpus365™**  
Antigen Retrieval System

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**United States (Headquarters)**  
6616 Owens Drive, Pleasanton, CA 94588, USA  
Toll Free: (888) 896-3350, customersupport@dbiosys.com

We're Social!



[www.dbiosys.com](http://www.dbiosys.com)

**Europe**  
Germany  
Lake Constance  
  
Cell: +49 7557 929 3915  
wolfgang.vogel@dbiosys.com

**Mexico**  
Avenida Aztecas # 95, Casa 4  
Colonia Pueblo de los Reyes  
Alcaldía Coyoacan  
CDMX, C.P. 04330  
  
Cell: +525535709693  
a.herrera@dbiosys.com

**India**  
612, Eden Square  
St. John's Road  
Secunderabad – 500003  
Tel: 040-40078333  
  
Cell: +91 9958293222  
anandam@dbiosys.com

**Canada**  
32 Lemsford Drive  
Markham, ON L3S 4H4  
  
Cell: +1 416 219 2035  
hosna.mujadidi@dbiosys.com