Colorectal Cancer Markers

Assessment, Diagnosis, Prognosis

of CRC and Prevention of Metastasis

IHC PRIMARY ANTIBODIES

Novel Antibodies for Colorectal Cancer

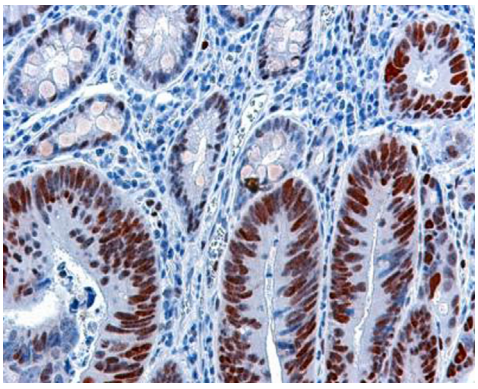
Colorectal cancer (CRC) is the third most common cancer in men (663,000 cases, 10.0% of the total) and the second in women (571,000 cases, 9.4% of the total) worldwide in 2008. Almost 60% of the cases occur in developed regions. About 608,000 deaths are estimated, accounting for 8% of all cancer deaths, making it the fourth most common cause of death from cancer.

About 75% of CRCs are sporadic and 25% are familial or inherited. Familial CRC is characterized by increased risk of CRC and an unclear pattern of inheritance. Inherited CRC exhibits a clear pattern of inheritance and includes hereditary nonpolyposis CRC (HNPCC), familial adenomatous polyposis (FAP) and rarer MYH-associated neoplasia, Peutz-Jeghers, and juvenile polyposis syndromes.

Determining the type of CRC by immunohistochemistry and molecular diagnostics has important implications for risk assessment, screening, diagnosis and differentiation, prognosis, as well as selection and monitoring of therapy for CRC.

Studies show that stage II colon cancer patients with MMR-D/MSI (mismatch repair deficiency/ microsatellite instability) tumors have a lower risk of recurrence compared to patients with MMR proficiency. Staining with a panel of four antibodies (MLH1, MSH2, MSH6, and PMS2) can identify defects in MMR proteins thus, pathologists can assess prognosis and prediction of response to therapy.

DBS' comprehensive colorectal panel includes novel rabbit monoclonal and mouse monoclonal antibodies. These antibodies ensure sensitivity and specificity of IHC tests. As a result, the pathologists and oncologists can have rapid and precise results and an accurate diagnosis to determine an effective treatment for their patients.



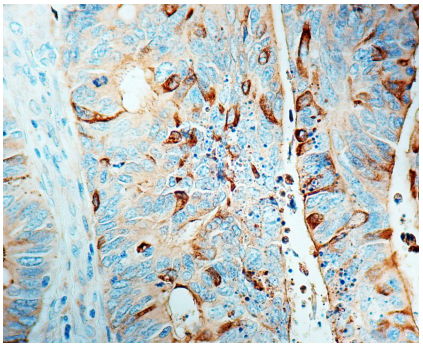
Colon Cancer stained with anti-MSH6 Ep49

DBS Antibodies

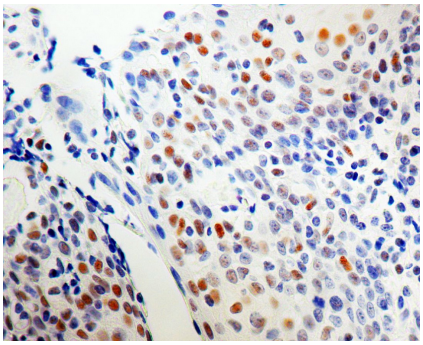
Name	Cat. No.	Clone	Clinical Utility
Beta-catenin	RP 080	Polyclonal (R)	Used to identify colorectal cancer, desmoid tumors and colon adenoma
CA19.9	Mob 109	C241:5:1:4 (M)	Used to identify gastrointestinal carcinomas, including adenocarcinomas of the stomach, intestine, and pancreas
CDX2	Mob 432	AMT28 (M)	Exclusively marks nuclei of colonic epithelial cells and colorectal cancers. May be used in identifying metastatic colon carcinoma
CEA	Mob 008 PDM 005	COL-1 (M)	Used for identification of CEA positive glycocalyx surface of gastrointestinal cells and colon carcinoma
CK7	Mob 057 PDM 097	OV-TL 12/30 (M)	Often used in conjunction with CK20 and CDX-2 to distinguish pulmonary, ovarian and breast carcinomas (CK7+) from most colon carcinomas (CK7-)
CK19	Mob 274	A53-B/A2.26 (M)	Useful for identification of epithelium and epithelial malignancies including adenocarcinomas of colon, stomach, pancreas, biliary tract, liver, breast, and thyroid carcinoma of the papillary type
CK20	Mob 123 PDM 049	Ks20.8 (M)	Used for identification of gastrointestinal tumors, mucinous ovarian tumors and Merkel cell carcinoma
CK Pan	Mob 190 PDM 072	AE1/AE3 (M)	Useful for identification of tumors as carcinoma or epithelial origin and for differential identification of undifferentiated colon carcinomas
COX2	RMAB 006 RMPD 006	SP21 (R)	Used for identification of colorectal adenocarcinoma
ERCC1	Mob 336 PDM 151	8F1 (M)	May be useful prognostic factors in oxaliplatin treatment of gastric and colorectal cancer
MLH-1	Mob 430 PDM 148	G168-15 (M)	Used for differential identification of colorectal carcinoma. Deficiency of MLH-1 is associated with the onset of HNPCC
MSH2	Mob 332 PDM 179	25D12 (M)	Used for evaluation of colorectal carcinoma. Loss or deficiency of MSH2 identifies colorectal cancers with defects in DNA mismatch repair
MSH6	RMAB 045 RMPD 045	EP49 (R)	Used for evaluation of colorectal carcinoma. Deficiency of MSH6 protein in colorectal cancers identifies tumors with defects in DNA mismatch repair
MUC1/EMA	Mob 063 PDM 007	GP1.4 (M)	Expressed in mammary gland epithelium but not in lung, colon carcinoma, kidney, hepatocellular, adrenal, embryonal carcinoma or osteosarcoma. The combination of positive staining for keratin with negative MUC1/EMA can be used to phenotype the epithelial tumors
P27Kip1	Mob 281	DCS-72.F6 (M)	Low expression has been associated with unfavorable prognosis in colon carcinoma, RCC, small breast carcinoma, NSCLC, HCC
p53	RMAB 016 RMPD 016	SP5 (R)	Overexpression of mutant p53 can be used to identify breast, lung, colon, stomach, bladder, and testis carcinomas, soft-tissue sarcomas and melanomas
PMS2	PDM 171	A16-4 (M)	Used for evaluation of colorectal carcinoma. Loss of PMS2 protein in colorectal cancers identifies tumors with defects in DNA mismatch repair
TIMP-1	Mob 317	102D1 (M)	May be used to distinguish colon adenocarcinomas from colon adenomas

R — Rabbit M — Mouse

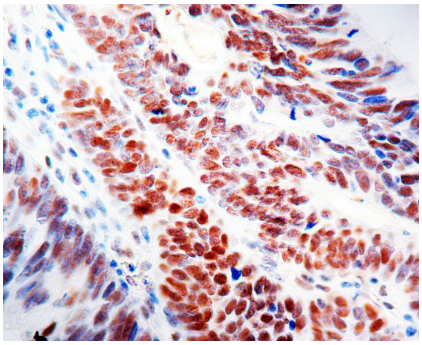
Diagnostic BioSystems



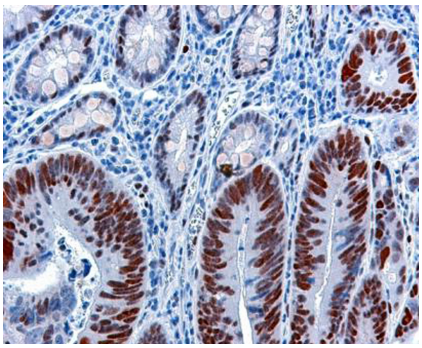
Colon cancer stained with anti-COX2 using DAB



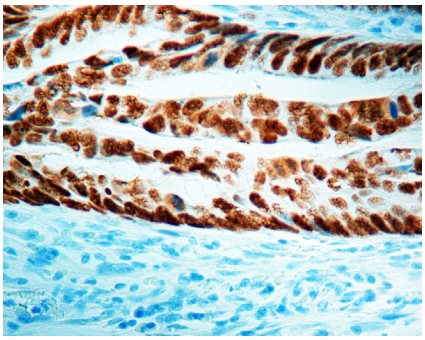
Human tonsil stained with anti-ERCC1 using DAB



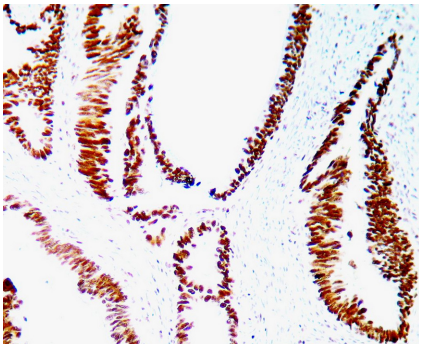
Human colon cancer stained with anti-MLH -1 using DAB



Colon cancer stained with anti-MSH6 using DAB



Colon cancer stained with anti-p53 using DAB



Colon adenocarcinoma stained with anti-PMS2 using DAB

Diagnostic BioSystems

DBS Antibodies

PolyVue Plus™ HRP Mouse/Rabbit HRP/DAB Kit:

- Proprietary non-biotin tandem hyperlabeling technology
- Fast staining protocol with superior sensitivity
- Suitable for manual staining or automated staining instruments

Size (100 ul/test)	100 Tests	1000 Tests
Catalog Number	PVP 100D	PVP 1000D

Diagnostic BioSystems

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