Lung Cancer Markers

Assessment, Diagnosis, Prognosis and Treatment Determination of NSCLC and SCLC

IHC PRIMARY ANTIBODIES

Novel Antibodies Including anti-p40 and anti-Napsin A Launched for Lung Cancer

Lung cancer has been estimated as the most common cancer in the world. An estimated 1.61 million people were diagnosed with lung cancer in 2008, accounting for 13% of the total cases. 55% of the cases occurred in the developing world. In the U.S., it is the second most common cancer in both men and women, accounting for about 14% of all new cancers. The ACS estimated 228,190 new cases, and 159,480 deaths accounting for 27% of all cancer deaths in 2013.

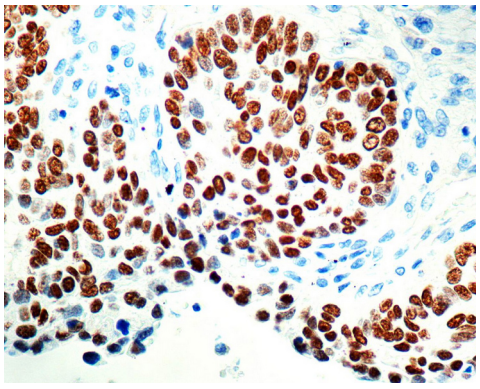
Lung cancer has two major types: non-small cell lung cancers (NSCLC) accounting for 80% and small cell lung cancers (SCLC) for 18%. NSCLC has three subtypes: adenocarcinoma (LADC) for 40%, squamous cell carcinoma (SqCC) for 30% and large cell carcinoma for 10%.

SCLC account for approximately 20% of lung cancers. They typically begin in the lung's bronchi and spread quickly, often to other parts of the body.

The assessment is critical for correct diagnosis. A pulmonary panel of antibodies is useful to distinguish types of lung cancer. The patients with SqCC cannot receive Avastin due to a 30% mortality rate as a result of fatal hemoptysis. A panel of p40, Napsin A, CK5/6, TTF-1 can be used to differentiate LADC from SqCC.

Biomarker	CK5/6	Napsin A	p40	TTF-1
LADC	-	+	-	+
SqCC	+	-	+	-

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



SqCC stained with anti-p40 using Stable DAB/PLUS

DBS Antibodies

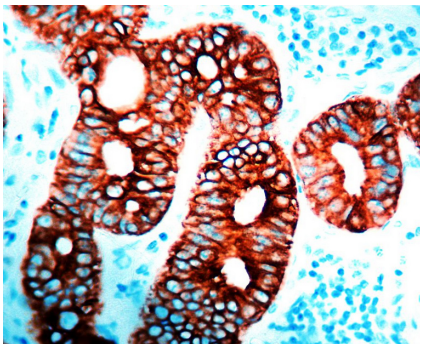
Name	Cat. No.	Clone	Clinical Utility
Calretinin	RMAB 010 RMPD 010	SP13 (R)	May be used to aid in the identification of mesothelioma, and in distinguishing mesothelioma from LADC.
CD56	Mob 261 PDM 110	1213C3.D5 (M)	Useful in the identification of neuroendocrine neoplasms such as SCLC.
CEA	Mob 008 PDM 005	COL-1 (M)	Useful in the identification and diagnosis of LADC within the context of an antibody panel, the patient's clinical history, and other diagnostic tests.
CK5	RMAB 029 RMPD 029	BV029 (R)	Studies show rabbit clone was more sensitive and specific for SqCC when compared to CK5/6.
CK5/6	RMAB 055 RMPD 055	EP24/EP67 (R)	Useful to differentiate SqCC (+) from LADC (-)
CK5/6	Mob 362 PDM 123	D5/16 B4 (M)	Useful to differentiate SqCC (+) from LADC (-)
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-)
CK8/18	Mob 189 PDM 070	5D3 (M)	Useful for demonstrating columnar cell differentiation when studying biphasic differentiation of basal cells of respiratory or intermediate epithelium. May be used for histological subclassification of some carcinomas such as lung carcinoma or LADC.
Chromogranin A	RMAB 015 RMPD 015	SP12 (R)	Used for identification of neuroendocrine cells and tumors. It is a significant prognostic factor for SCLC.
Chromogranin A	Mob 048 PDM 067	LK2H10 (M)	Used for identification of neuroendocrine cells and tumors. It is a significant prognostic factor for SCLC.
EMA	Mob 401	E29 (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 EMA can be used to phenotype the epithelial tumors.
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 EMA can be used to phenotype the epithelial tumors.
Factor VIII Related Antigen	Mob 196 PDM 019	F8/86 (M)	Proven to be useful markers for the identification of endothelial cells which are found in lung and for the assessment of endothelial differentiation in neoplasms and a variety of other lesions.
Napsin A	Mob 463 PDM 154	KCG1.1 (M)	A tumor marker for primary LADC. Its expression correlates with the differentiation grade of LADC.
NSE	Mob 212	VI-H14 (M)	Measurement of NSE level in patients with small cell lung cancer can provide information about the extent of the disease and the patient's prognosis, as well as about the patient's response to treatment.
p40	RP 163 PDR 055	Polyclonal (R)	Exhibits equivalent sensitivity and superior specificity to p63 in SqCC, thus eliminating a potential pitfall of misinterpreting a p63 positive LADC or unsuspected Lymphoma as SqCC.
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.

R — Rabbit M — Mouse

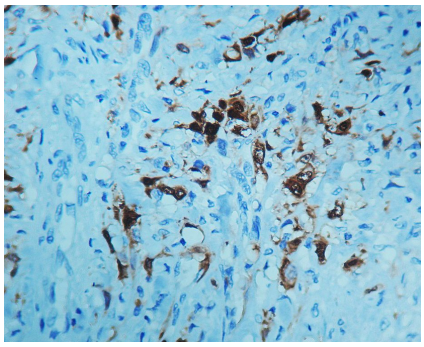
Diagnostic BioSystems

Name	Cat. No.	Clone	Clinical Utility
p53	Mob 082 PDM 013	DO7 (M)	Overexpression of mutant p53 can be used to identify breast, lung, colon, stomach, bladder, and testis carcinomas, soft-tissue sarcomas and melanomas.
Synaptophysin	RMAB 018 RMPD 018	SP11 (R)	For identification of neuroendocrine neoplasms, including neoplasms of epithelial type, such as neuroendocrine lung tumors (e.g. carcinoid, atypic carcinoid, SCLC, LCNEC and non-small cell lung cancer).
TTF-1	Mob 285 PDM104	8G7G3/1 (M)	Expressed in epithelial cells of the thyroid gland and lung. The antibody stains primary LADC and small cell carcinoma but does not stain colon and breast carcinoma.

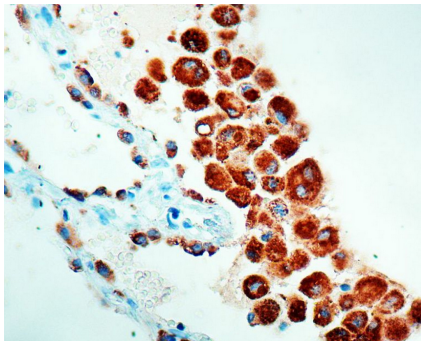
R — Rabbit M — Mouse



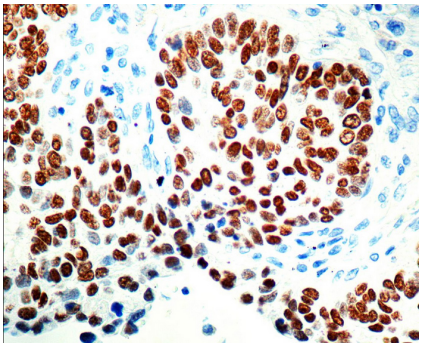
Lung stained with anti-CK7 using DAB



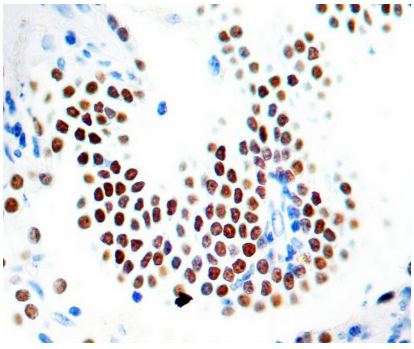
Human mesothelioma stained with anti-Calretinin using DAB



Lung adenocarcinoma stained with anti-Napsin A using DAB



SqCC stained with anti-p40 using Stable DAB/PLUS



Lung adenocarcinoma stained with anti-TTF-1 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

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