

Target-Validated and Characterized IVD Antibodies for Pathology and Immunotherapy

PRODUCT FOCUS -- Lung Cancer

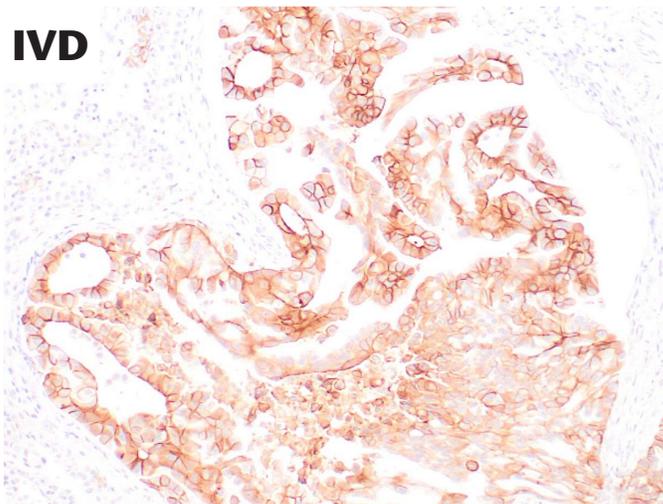
World Lung Cancer Day, Sunday August 1, 202. New research, diagnosis, and treatment breakthroughs in the last 10 years have brought new hope to patients and their families. There is still so far to go. With a 22% five-year survival rate, lung cancer ranks the lowest among the other most common cancers: prostate cancer (98%), breast cancer (90%), and colorectal cancer (65%). The poor survival rate for lung cancer is a direct result of the lack of funding for lung cancer research. (Source:LCFA)

Zeta Corporation is very excited and proud to share IVD antibodies researched and developed for Anatomic Pathology market for Immunohistochemistry. Zeta is incorporating highly sensitive technology to develop many of these Monospecific primary antibodies that are Target-Validated and Characterized for IHC on FFPE tissue sections. We provide over 300 IVD antibodies for cancer targeted therapy and immunotherapy due to gene mutations, chromosomal translocations or gene amplifications.

PD-L1 Rabbit Monoclonal Antibody

Anti-rabbit: clone ZR3, Cat # Z2002

Programmed cell death ligand 1 (PD L1) also known as cluster of differentiation (CD274) or B7 homolog1 (B7 H1) is a type 1 transmembrane protein involved in the regulation of cellular and humoral immune responses. The interaction of PD L1 with its receptor PD 1 provides both stimulatory and inhibitory signals in regulating T cell activation and tolerance during pregnancy, tissue allografts, autoimmune disease and malignant transformation. The binding of PD L1 to PD 1 induces apoptosis or exhaustion in activated T cells, and blockade of this interaction has been shown to enhance the antitumor activity of T cells. PD L1 is frequently over expressed in placenta, and many human tumors such as melanoma, diffuse large B cell lymphoma, and carcinomas of the lung, bladder, breast, kidney and colon.



Lung adenocarcinoma stained with ZR3

References:

1. Tokito T, *et al.* Eur J Cancer 2016; **55**:7 14.
2. Kakavand H, *et al.* Mod Pathol 2015; **28**:1535 44.
3. Xia B, *et al.* Mol Cancer Ther 2015; **14**:847 56.

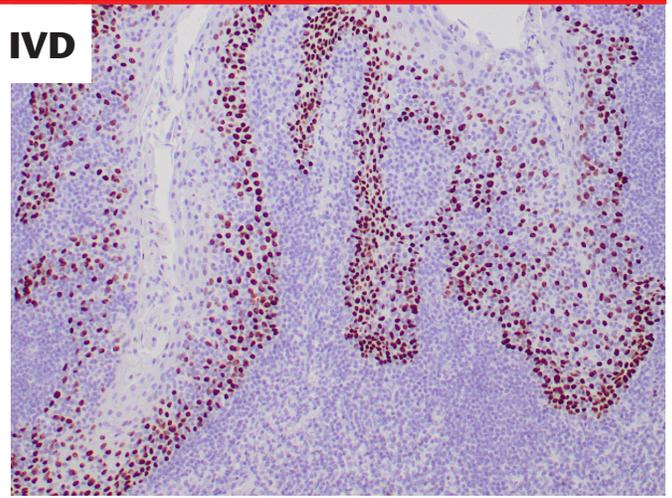
All antibodies are offered in different format and size with the Suffix after the Catalog #s; "L", "S" & "T" for Concentrated antibodies in 1.0 ml, 0.5 ml & 0.1 ml sizes and Suffix "P" for Ready To Use (RTU) in 7 ml.

p40 Rabbit Monoclonal Antibody

Anti-rabbit: clone ZR8, Cat # Z2004

p63 consists of two major isoforms TAp63 and DNp63. The TAp63 isoform (identified by anti p63 antibody) regulates the expression of the growth inhibitory genes. In contrast, DNp63 isoform (identified by anti p40 antibody) antagonizes the activity of TAp63 and p53. The p40 (clone ZR8) antibody recognizes exclusively DNp63 but not TAp63. p40 is a squamous cell carcinoma 'specific' antibody. It reacts with the vast majority of cases of squamous cell carcinomas of various origins, but not with adenocarcinomas. It is particularly useful in differentiating lung squamous cell carcinoma from lung poorly differentiated adenocarcinoma. p40 antibody can also be used as an alternative basal cell/myoepithelial cell marker, which has similar sensitivity and specificity as that of p63 antibody. Therefore, p40 antibody may also be used as an alternative immunohistochemical marker for determining prostate adenocarcinoma vs. benign prostate glands and for determining breast intraductal carcinoma vs. invasive breast ductal carcinoma.

IVD



Lung squamous cell carcinoma stained with ZR8

References:

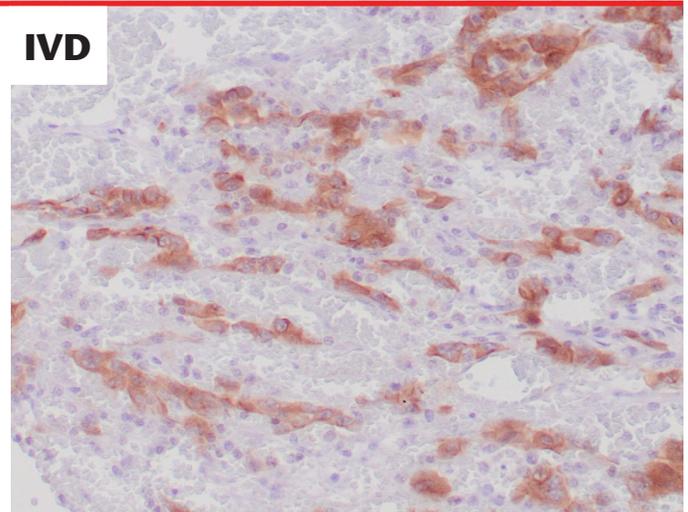
1. Bishop JA, et al. *Mod Pathol* 2012; **25**:405 15.
2. Signoretti S, et al. *Am J Pathol* 2000; **157**:1769 75.
3. Barbareschi M, et al. *Am J Surg Pathol* 2001; **25**:1054 60.

ALK Mouse monoclonal Antibody

Anti-mouse: Clone: ZR305, Cat # Z2534

The ALK gene encodes a receptor tyrosine kinase, which belongs to the insulin receptor superfamily. It plays an important role in the development of the brain and exerts its effects on specific neurons in the nervous system. This gene has been found to be rearranged, mutated, or amplified in a series of tumors including anaplastic large cell lymphomas, neuroblastoma, and non small cell lung cancer. The chromosomal rearrangements are the most common genetic alterations in this gene, which result in creation of multiple fusion genes in tumorigenesis, including ALK/EML4, ALK/RANBP2, ALK/ATIC, ALK/TFG, ALK/NPM1, ALK/SQSTM1, ALK/KIF5B, ALK/CLTC, ALK/TPM4, and ALK/MSN. The specificity of the anti human ALK antibody (clone ZR305) was established on known ALK positive non small cell lung carcinoma (NSCLC), anaplastic large cell lymphoma (ALCL), and inflammatory myofibroblastic tumor (IMT).

IVD



Lung adenocarcinoma stained with ZR305

References:

1. S, van den Borne BE, et al. *Clin Cancer Res* 2017; **23**:4251 425.
2. Shi R, et al. *J Thorac Oncol* 2016; **11**:2248 2252.
3. Rooper LM, et al. *Hum Pathol* 2016; **51**:139 45.

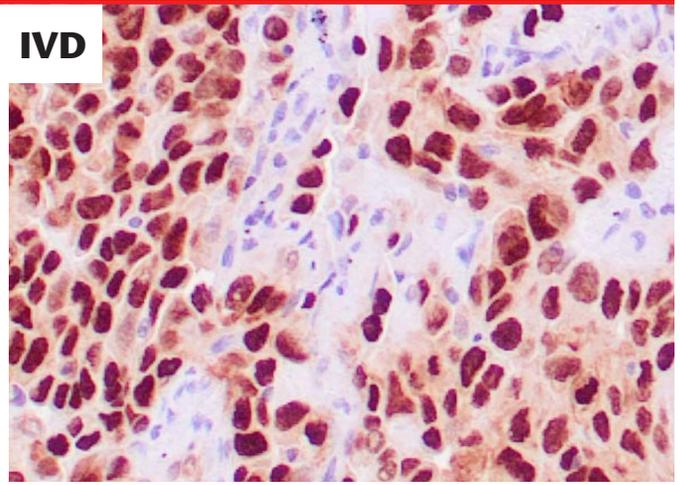
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TTF-1 Rabbit Monoclonal Antibody

Anti-rabbit: clone ZR176, Cat # Z2370

Recognizes a protein of 40kDa, identified as Thyroid transcription factor-1 (TTF-1). TTF-1 is a member of the NKx2 family of homeodomain transcription factors. It is expressed in epithelial cells of the thyroid gland and the lung. Nuclei from liver, stomach, pancreas, small intestine, colon, kidney, breast, skin, testes, pituitary, prostate, and adrenal glands are unreactive. Anti-TTF-1 is useful in differentiating primary adenocarcinoma of the lung from metastatic carcinomas originating in the breast, mediastinal germ cell tumors, and malignant mesothelioma. It can also be used to differentiate small cell lung carcinoma from lymphoid infiltrates. Loss of TTF-1 expression in non-small cell lung carcinoma has been associated with aggressive behavior of such neoplasms. TTF-1 reactivity is also seen in thyroid malignancies.

IVD



Lung adenocarcinoma stained with ZR176

References:

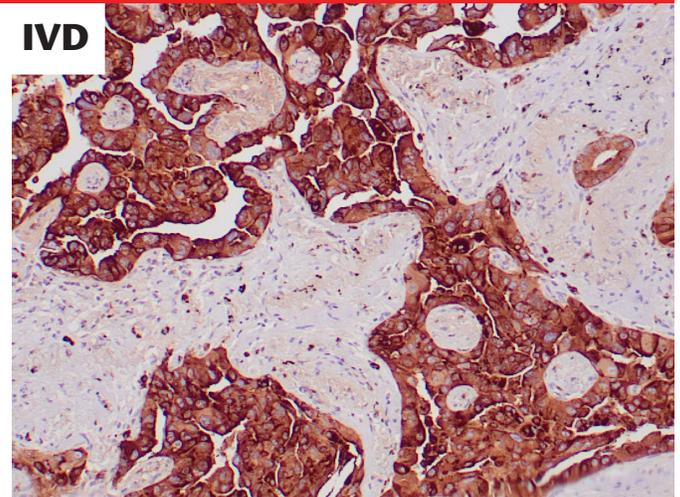
1. Abutaily AS, et al. *J Clin Pathol* 2002; **55**:662-8.
2. Katoh R, et al. *Mod Pathol* 2000; **13**:570-6.
3. Tan D, et al. *Hum Pathol* 2003; **34**:597-604.

Napsin A Mouse Monoclonal Antibody

Anti-mouse: clone ZM11, Cat # Z2294

Napsin is a pepsin like aspartic proteinase, in the A1 clan of the AA clade of proteinases. There are two closely related napsins, napsin A and napsin B. Napsin A is expressed as a single chain protein with the molecular weight of approximately 38 kDa. Immunohistochemical studies revealed high expression levels of napsin A in human lung and kidney but low expression in spleen. Napsin A is expressed in type II pneumocytes and in adenocarcinomas of lung. The high specificity expression of napsin A in adenocarcinomas of lung is useful to distinguish primary lung adenocarcinomas from adenocarcinomas of other organs.

IVD



Lung adenocarcinoma stained with ZM11

References:

1. Bishop JA, et al. *Hum Pathol* 2010; **41**:20 5.
2. Inamura K, et al. *Am J Surg Pathol* 2005; **29**:660 5.
3. Mukhopadhyay S, et al. *Am J Surg Pathol* 2011; **35**:15 25.

Related Antibodies	Conality	Cat. #	Application
CK 5/6 (D5-16B4)	Mouse Monoclonal Antibody	Z2133	IVD
Calretinin (ZM85)	Mouse Monoclonal Antibody	Z2392	IVD
Mesothelial Cells (HBME-1)	Mouse Monoclonal Antibody	Z2233	IVD
Mesothelin (ZM25)	Mouse Monoclonal Antibody	Z2353	IVD
WT-1 (6F-H2)	Mouse Monoclonal Antibody	Z2124	IVD

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