ZETA Corporation

TARGET-VALIDATED AND CHARACTERIZED IVD ANTIBODIES
FOR PATHOLOGY AND IMMUNOTHERAPY

Prostate Focus

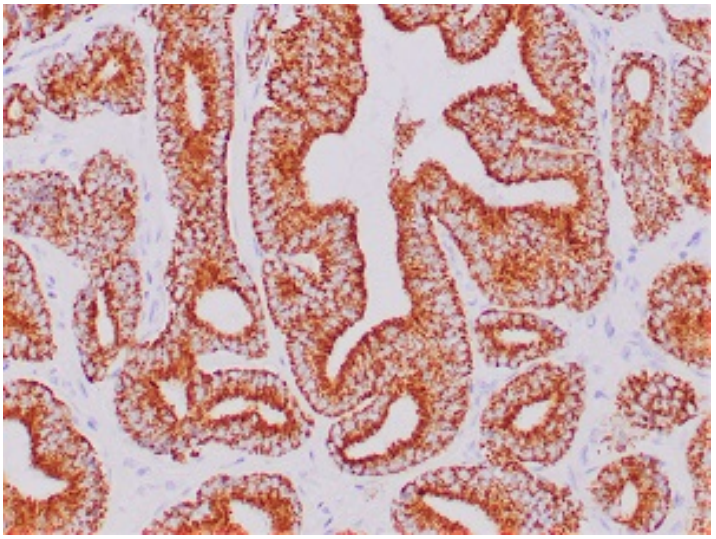
Zeta is very excited and proud to share IVD antibodies researched and developed for Anatomic Pathology market for Immunohistochemistry. Zeta is incorporating highly sensitive technology to develop many of these Monospecific primary antibodies that are Target-Validated and Characterized for IHC on FFPE tissue sections.

Zeta provides over 300 IVD antibodies for cancer targeted therapy and immunotherapy due to gene mutations, chromosomal translocations or gene amplifications.

AMACR Rabbit Monoclonal Antibody IVD

Anti-rabbit: Clone 13H4, Cat # Z2001

AMACR (P504S) is an essential enzyme in the b-oxidation of branched-chain fatty acids. Recently, AMACR (P504S) was identified through cDNA library subtraction and microarrays in malignant prostate tissues. High expression of AMACR (P504S) protein is found in prostatic adenocarcinoma but not in benign prostatic tissue by immunohistochemical staining in paraffin-embedded tissues. The expression of AMACR (P504S) is also detected in two premalignant lesions of the prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. Using AMACR (P504S) as a positive marker along with basal cell staining (34bE12 or P63) as a negative marker could help to confirm the diagnosis of small focus of prostate carcinoma on needle biopsy.



Prostate acinar carcinoma stained with AMACR

*Reference:

1. Xu J, et al. Canc Res.2000; 60:167.
2. Jiang Z, et al. Hum Pathol. 2003;34:792.
3. Jiang Z, etal. Am J Surg Pathol. 2001;25:1397.

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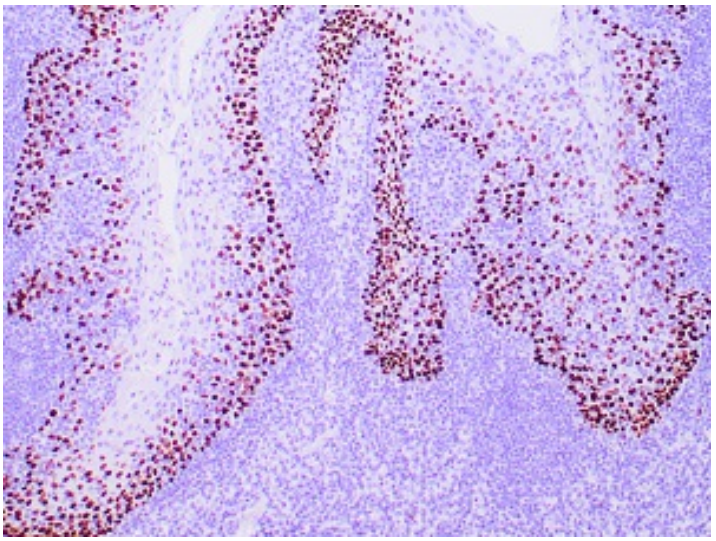
p40 Rabbit Monoclonal Antibody

IVD

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.



Tonsil stained with P40

*Reference:

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.

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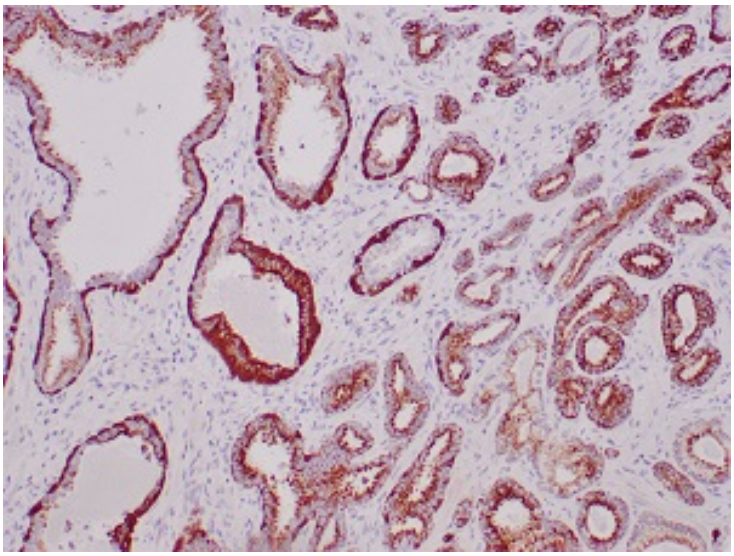
AMACR+p63+CK HMW Mouse+Rabbit monoclonal cocktail Antibody IVD

Anti-mouse+Anti-rabbit: Clone: 13H4+ZM70+34βE12, Cat # Z2015

AMACR is an essential enzyme in the beta-oxidation of branched-chain fatty acids. High expression of AMACR protein is found in prostate adenocarcinoma but not in benign prostate tissue by immunohistochemical staining in paraffin-embedded tissue. The p63 protein, a homologue of the tumor-suppressor p53, is highly expressed in the basal or progenitor layer of many epithelial tissues. P63 is detected in prostate basal cells in normal prostate glands and PIN. However, it is negative in prostate adenocarcinoma. CK 34βE12 recognizes basal cells of benign prostate glands and PIN. Like p63, it is negative in prostate adenocarcinoma. Thus, CK 34βE12 and p63 are useful as differential markers for benign prostate glands and adenocarcinoma (negative markers). The combination of AMACR, CK 34βE12 and p63 may be extremely useful for diagnosing PIN and small focus adenocarcinoma, especially in difficult cases and cases with limited tissues.



Normal and prostate adenocarcinoma stained with AMACR (luminal in carcinoma) and p63 and CK HMW 34BE12 (basal cells in normal glands)

*Reference:

1. Moll R, et al. Cell. 1982; 31(1):11-24.
2. Shah RB, et al. Am J Surg Pathol. 2002; 26:1161-8.
3. Shah RB, et al. Hum Pathol. 2007; 38:332-41.

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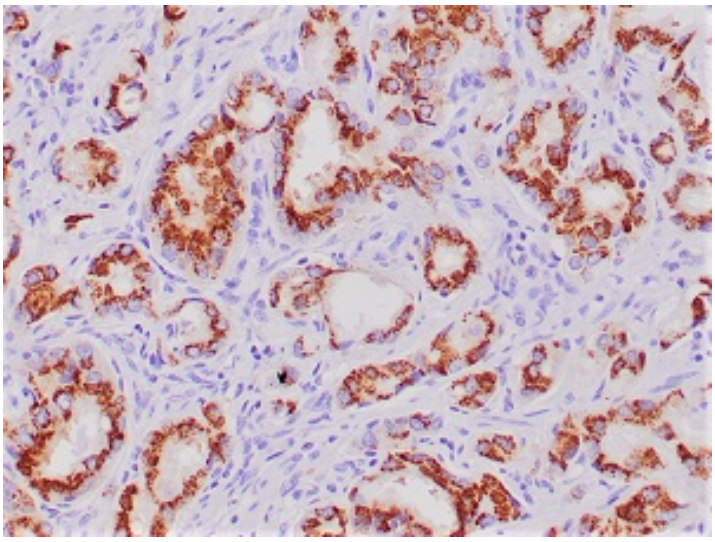
Prostein Rabbit Monoclonal Antibody

IVD

Anti-rabbit: Clone: ZR9, Cat # Z2006

Human prostein is a 553 aa protein identified by cDNA library subtraction and subsequent high-throughput microarray screening of prostate cancer. Prostein has multiple transmembrane domains. Prostein has been shown to be uniquely expressed in normal and cancerous prostatic tissues. By immunohistochemistry, prostein is expressed in the vast majority of normal and malignant prostatic tissues, regardless of grade and metastatic status. No protein expression is detected in normal and malignant tissue samples representing the great majority of essential tissues and tumors. In particular, prostein is expressed in most of poorly differentiated prostatic carcinoma, including small cell prostate carcinoma. Prostein is more specific and sensitive for prostatic carcinomas than PSA and PSAP.



Prostate adenocarcinoma stained with prostein

*Reference:
1. Kalos M. et al. Prostate. 2004; 60:246.
2. Xu J, et al. Cancer Res. 2001; 1:1563

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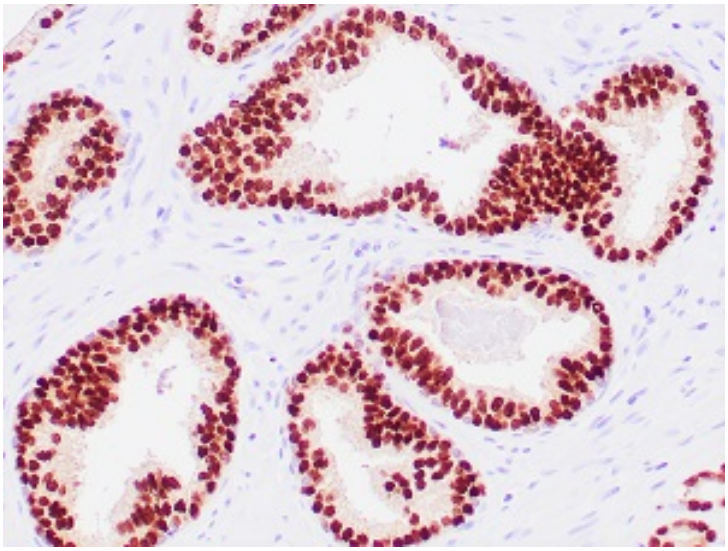
NKX3.1 Mouse Monoclonal Antibody IVD

Anti-mouse: Clone ZM95, Cat # Z2395

NKX3.1 is a prostate specific gene encoding a transcription factor that plays an important role in normal prostate development and carcinogenesis. It is a prostatic tumor suppressor gene located on chromosome 8p21.2, which frequently undergoes a loss of heterozygosity. NKX3.1 expression is highly restricted in prostate epithelial cells and therefore can be used as a diagnostic biomarker for prostate cancer and other metastatic lesions of prostatic origin. Furthermore, NKX3.1 shows better sensitivity than Prostate Specific Antigen (PSA) for identifying metastatic prostatic adenocarcinoma. This suggests that immunohistochemical staining of NKX3.1, along with other prostate-restricted markers, may be valuable for the definitive determination of prostatic origin in poorly differentiated metastatic carcinomas.



Prostate adenocarcinoma stained with NKX3.1

*Reference:
1. Gurel B, et al. Am J Surg Pathol. 2010; 34:1097-105.
2. Chuang AY, et al. Am J Surg Pathol. 2007; 31:1246-55.

Related Products:

CK-HMW (34βE12)	Mouse Monoclonal Antibody	Z2019	IVD
AMACR+p63 (13H4+ZM70)	Mouse+Rabbit Monoclonal Cocktail Antibody	Z2008	IVD
Basel Cell Cocktail(34βE12+4A4)	Mouse Monoclonal Cocktail Antibody	Z2304	RUO
p63 (ZM70)	Mouse Monoclonal Antibody	Z2380	IVD

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.