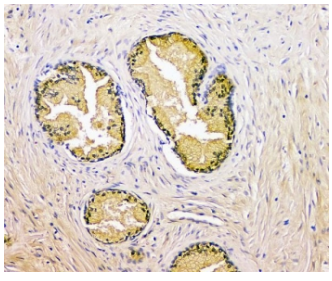
PSA Antibody Rabbit Polyclonal / Prostate Specific Antigen KLK3 Antibody (RQ6322)

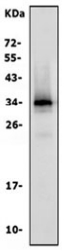
Catalog No.	Formulation	Size
RQ6322	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P07288
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Direct ELISA : 0.1-0.5ug/ml
Limitations	This PSA antibody is available for research use only.



PSA Antibody Rabbit Polyclonal IHC staining of human prostate cancer. Immunohistochemistry analysis of FFPE human prostate carcinoma using PSA Antibody Rabbit Polyclonal shows strong HRP-DAB brown cytoplasmic staining in malignant glandular epithelial cells, consistent with Prostate specific antigen (KLK3) expression in prostate-derived tumor cells, while surrounding stromal cells remain largely negative. HIER: tissue sections were boiled in pH 8 EDTA buffer for 20 minutes and allowed to cool before testing.



Western blot testing of human LNCaP cell lysate with polyclonal PSA antibody. Expected molecular weight: 30-40 kDa.

Description

Prostate specific antigen (KLK3) is a secreted serine protease produced primarily by luminal epithelial cells of the prostate gland and encoded by the KLK3 gene. The protein is widely known as Prostate specific antigen or PSA and belongs to the kallikrein related peptidase family of proteolytic enzymes. PSA Antibody Rabbit Polyclonal recognizes the KLK3 protein and enables detection of PSA expression in research studies investigating prostate epithelial biology and prostate cancer.

PSA functions as a chymotrypsin like protease involved in the processing of seminal fluid proteins. In the prostate gland, PSA is secreted into the lumen of prostatic ducts and acini where it cleaves structural proteins such as semenogelin, contributing to the liquefaction of seminal coagulum after ejaculation. The protein is synthesized as a precursor enzyme that undergoes signal peptide removal and proteolytic activation during secretion from prostate epithelial cells.

In normal human tissues, KLK3 expression is highly restricted to luminal epithelial cells of the prostate gland. Within prostate tissue sections, PSA protein is typically localized to the cytoplasm and luminal secretions of glandular epithelial cells. This highly restricted tissue distribution has made PSA one of the most widely used markers for identifying prostate epithelial differentiation in biological and cancer research.

PSA expression is commonly retained in prostate adenocarcinoma and in metastatic tumors derived from prostate cancer. Detection of KLK3 expression can therefore support research examining the cellular origin of tumors and the differentiation status of prostate cancer cells. Evaluation of PSA expression patterns in prostate tumors and metastatic lesions helps investigators study prostate tumor progression and prostate epithelial biology.

A PSA Antibody Rabbit Polyclonal provides a sensitive reagent for detecting Prostate specific antigen in research applications involving prostate tissues and prostate cancer models. Polyclonal antibodies recognize multiple epitopes within the PSA protein, which can enhance antigen detection in tissue and protein-based assays while maintaining specificity for the KLK3 protein.

Application Notes

Optimal dilution of the PSA Antibody Rabbit Polyclonal should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids A64-D255) was used as the immunogen for the PSA antibody.

Storage

After reconstitution, the PSA antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Prostate specific antigen antibody, KLK3 antibody, Kallikrein related peptidase 3 antibody, Human PSA antibody