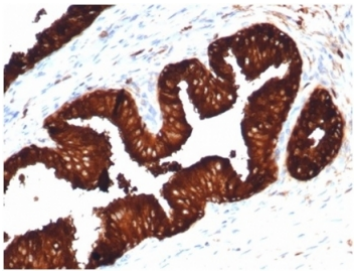
Recombinant PSA Antibody KLK3/4602R / Prostate Specific Antigen KLK3 Antibody [clone KLK3/4602R] (V9540)

Catalog No.	Formulation	Size
V9540-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9540-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9540SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

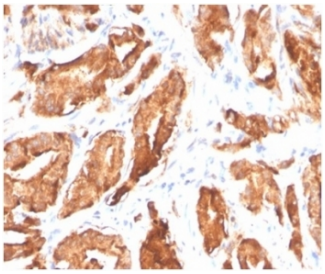
Recombinant RABBIT MONOCLONAL

Bulk quote request

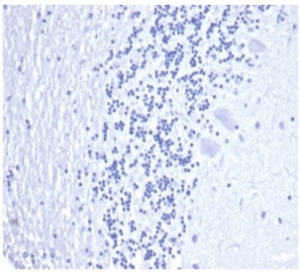
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	KLK3/4602R
Purity	Protein A/G affinity
UniProt	P07288
Localization	Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This recombinant PSA antibody is available for research use only.



Recombinant PSA Antibody KLK3/4602R IHC staining of human prostate carcinoma. Immunohistochemistry analysis of FFPE human prostate carcinoma tissue using Recombinant PSA Antibody KLK3/4602R shows strong HRP-DAB brown cytoplasmic staining in malignant glandular epithelial cells forming tumor glands, consistent with Prostate specific antigen (KLK3) expression in prostate-derived carcinoma cells, while surrounding stromal cells are largely negative. HIER: tissue sections were boiled in pH 9 10mM Tris with 1mM EDTA for 20 minutes and allowed to cool before testing.



Recombinant PSA Antibody KLK3/4602R IHC staining of human prostate carcinoma. Immunohistochemistry analysis of FFPE human prostate carcinoma tissue using Recombinant PSA Antibody KLK3/4602R demonstrates strong HRP-DAB brown cytoplasmic staining in malignant prostate epithelial cells forming irregular glandular tumor structures, consistent with Prostate specific antigen (KLK3) expression in prostate-derived carcinoma. Surrounding stromal cells show little to no staining. HIER: tissue sections were boiled in pH 9 10mM Tris with 1mM EDTA for 20 minutes and allowed to cool before testing.



Negative control: IHC staining of FFPE human brain tissue with recombinant PSA antibody (clone KLK3/4602R) at 2ug/ml in PBS for 30min RT. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

Prostate specific antigen (KLK3) is a secreted serine protease encoded by the KLK3 gene and produced primarily by luminal epithelial cells of the prostate gland. The protein is widely known as Prostate specific antigen or PSA and belongs to the kallikrein related peptidase family of serine proteases. Recombinant PSA Antibody KLK3/4602R recognizes the KLK3 protein and enables detection of PSA expression in research studies investigating prostate epithelial biology and prostate cancer.

PSA is synthesized as a precursor enzyme that contains a signal peptide and propeptide sequence that are removed during secretion. The mature enzyme functions as a protease in seminal plasma, where it cleaves semenogelins and other seminal proteins to promote liquefaction of the seminal coagulum after ejaculation. Because of this specialized physiological role, PSA expression is highly restricted to prostate epithelial cells under normal biological conditions.

Within prostate tissue, KLK3 protein is typically localized to the cytoplasm and luminal secretions of glandular epithelial cells lining prostatic ducts and acini. The protein is actively synthesized and secreted by luminal epithelial cells, reflecting the functional role of the prostate gland in seminal fluid production. This highly restricted expression pattern has made PSA one of the most widely studied markers of prostate epithelial differentiation.

PSA expression is commonly retained in prostate adenocarcinoma and in metastatic tumors derived from prostate tissue. Detection of KLK3 expression is therefore frequently used in studies examining prostate tumor biology, cellular differentiation, and the lineage origin of prostate derived malignancies. Evaluation of PSA expression patterns provides insight into the biology of prostate cancer and the characteristics of prostate epithelial cells.

Recombinant PSA Antibody KLK3/4602R provides a reagent for detecting Prostate specific antigen in studies of prostate tissue biology and prostate cancer models. Recombinant monoclonal antibodies recognize a defined epitope within the target protein, providing consistent antigen recognition while enabling investigation of KLK3 protein expression in a variety of molecular and cellular research systems.

Application Notes

Optimal dilution of the Recombinant PSA Antibody KLK3/4602R should be determined by the researcher.

Immunogen

A portion of amino acids 150-250 of Prostate-specific antigen protein was used as the immunogen for the recombinant PSA antibody.

Storage

Aliquot the recombinant PSA antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

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