

Prostate Specific Antigen (PSA) Active Protein | PSA active protein

Active Prostate Specific Antigen (PSA)

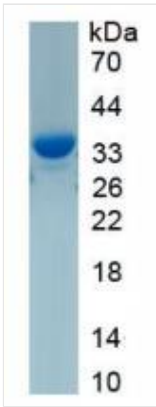
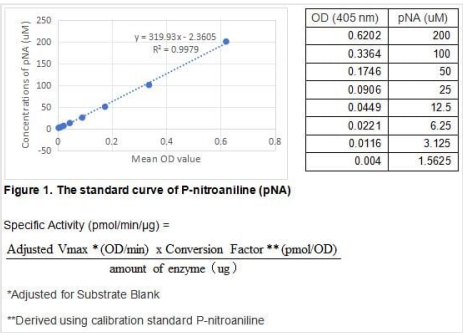
CATALOG # AAA161711	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Prostate Specific Antigen (PSA); Active Prostate Specific Antigen (PSA); Prostate Specific Antigen; KLK3; APS; KLK2A1; HK3; KLKB1; Semin; Kallikrein-Related Peptidase 3; Semenogelase; g-Seminoprotein; P-30 Antigen; Plasma kallikrein4; PSA active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ile25~Pro2 61
Applicable Applications for PSA active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	7.5
Research Area	Tumor immunity, Reproductive science
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



SDS-PAGE
Figure. SDS-PAGE

Bioactivity

Kallikrein 3, commonly known as prostate specific antigen (PSA), is a serine protease of the human tissue Kallikrein gene family. PSA is synthesized in the ductal and acinar epithelium of the prostate gland and secreted into the seminal plasma in high concentrations (0.5 - 2 g/L). A small portion of PSA "leaks" into the systemic circulation, the levels of which increase significantly (30-fold) from prostate cancer tissue than normal prostate tissue. PSA has become a well established tumor marker that aids the identification, staging, and follow up of prostate cancer. The activity of recombinant human KLK3 is measured by its ability to cleave a colorimetric peptide substrate Suc-Arg-Pro-Tyr-pNa in the assay buffer 50 mM Tris, 1 M NaCl, pH 8.0. The rhKLK3 is diluted to 200 ug/ml in activation buffer 50 mM Tris, 10 mM CaCl2, 150 mM NaCl, 0.05% Brij-35, pH 7.5, then activated with a final concentration of 1 ug/ml Thermolysin at 37 degree C for 5min. Adding a final concentration of 10 mM 1,10 Phenanthroline to stop the activation. The activated rhKLK3 is diluted to 50 ug/mL in assay buffer. Loading into a clear well plate 50 uL of 50 ug/mL rhKLK3 and start the reaction by adding 50 uL of 2 mM substrate, with a substrate blank containing 50 uL assay buffer, 50 uL substrate, and no rhKLK3. Then read at 405 nm in kinetic mode for 5 minutes. The specific activity of recombinant human KLK3 is > 400 pmol/min/ug.

ADDITIONAL INFORMATION

Product Categories/Family for PSA active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	71834853
NCBI GeneID	354
NCBI Accession #	NP_001025218.1
NCBI GenBank Nucleotide #	NM_001030047.1
UniProt Accession #	P07288; Q15096; Q16272; Q86TG8; C9JXH3; G3V0H4; G3XAE3
Molecular Weight	28,741 Da
NCBI Official Full Name	prostate-specific antigen isoform 3 preproprotein
NCBI Official Synonym Full Names	kallikrein-related peptidase 3
NCBI Official Symbol	KLK3
NCBI Official Synonym Symbols	APS; PSA; hK3; KLK2A1
NCBI Protein Information	prostate-specific antigen; seminin; P-30 antigen; kallikrein-3; semenogelase; gamma-seminoprotein; prostate specific antigen
UniProt Protein Name	Prostate-specific antigen
UniProt Gene Name	KLK3
UniProt Synonym Gene Names	APS; PSA; Semin

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/prostate-specific-antigen-psa/161711>