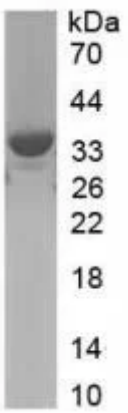
Active Prostate Specific Antigen (PSA)

Catalog#:PEH12263

概述（Summary）

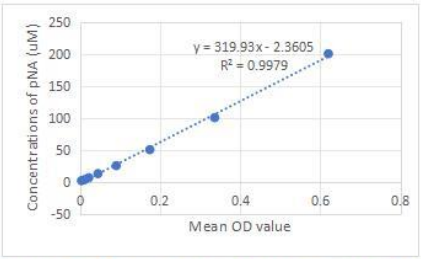
别称（Alternative Names）	KLK3; APS; KLK2A1; HK3; KLKB1; Seminin; Prostate Specific Antigen; Kallikrein-Related Peptidase 3; Semenogelase, g-Seminoprotein; P-30 Antigen; Plasma kallikrein
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ile25-Pro261】
Accession #	P07288
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	29.8 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Hydrolyzes semenogelin-1 thus leading to the liquefaction of the seminal coagulum.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



OD (405 nm)	pNA (uM)
0.6202	200
0.3364	100
0.1746	50
0.0906	25
0.0449	12.5
0.0221	6.25
0.0116	3.125
0.004	1.5625

Figure 1. The standard curve of P-nitroaniline (pNA)

Specific Activity (pmol/min/µg) =

$$\frac{\text{Adjusted Vmax * (OD/min) x Conversion Factor ** (pmol/OD)}}{\text{amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank

**Derived using calibration standard P-nitroaniline

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 diagnosis, 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 ℃ 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 µL of 50 ug/mL rhKLK3 and start the reaction by adding 50 µL of 2 mM substrate, with a substrate blank containing 50 µL assay buffer, 50 µL 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/µg.

注意事项（Note）

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