

APA151Hu01 100µg
Active Prostate Specific Antigen (PSA)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ile25~Pro261

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 7.5

Predicted Molecular Mass: 29.8kDa

Accurate Molecular Mass: 30kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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IVGGWE CEKHSQPWQV LVASRGRAVC
GGVLVHPQWV LTAAH CIRNK SVILLGRHSL FHPEDTGQVF QVSHSFPHPPL
YDMSLLKNRF LRPGDDSSHD LMLLRLSEPA ELTDAVKVMD LPTQEPALGT
TCYASGWGSI EPEEFLTPKK LQCVDLHVIS NDVCAQVHPQ KVTKFMLCAG
RWTGGKSTCS GDSGGPLVCN GVLQGITSWG SEPCALPERP SLYTKVVHYR
KWIKDTIVAN P
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[ACTIVITY]

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 °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 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

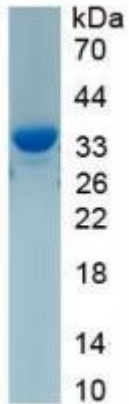


Figure 3. SDS-PAGE

Sample: Active recombinant PSA, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.