

**APE206Hu01 100µg**  
**Active Puromycin Sensitive Aminopeptidase (PSA)**  
**Organism Species: *Homo sapiens* (Human)**  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Gly584~Gln793

**Tags:** N-terminal His-tag

**Purity:** >92%

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

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 6.0

**Predicted Molecular Mass:** 24.7kDa

**Accurate Molecular Mass:** 25kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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.

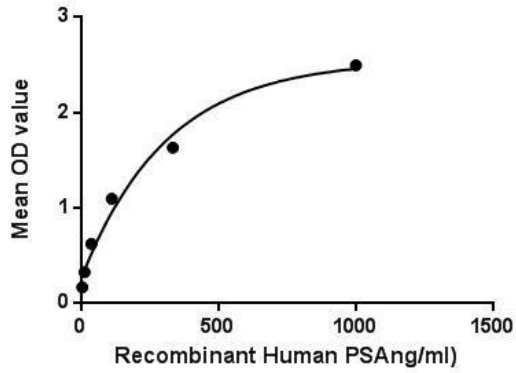
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration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

## **[ SEQUENCE ]**

```
                GTVGFYR  TQYSSAMLES
LLPGIRDLSL PPVDRLGLQN DLFSLARAGI ISTVEVLKVM EAFVNEPNYT
VWSDLSCNLG ILSTLLSHTD FYEEIQEFVK DVFSPIGERL GWDPKPGEGH
LDALLRGLVL GKLKAGHKA TLEEARRRFK DHVEGKQILS ADLRSPVYLT
VLKHGDGTTL DIMLKLHKQA DMQEEKNRIE RVLGATLLPD LIQ
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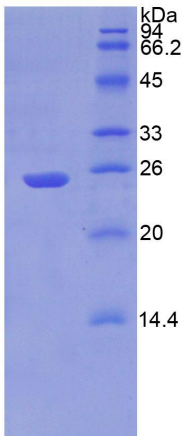
## **[ ACTIVITY ]**

Puromycin Sensitive Aminopeptidase (PSA) also known as cytosol alanyl aminopeptidase or alanine aminopeptidase (AAP) is used as a biomarker to detect damage to the kidneys, and that may be used to help diagnose certain kidney disorders. It is found at high levels in the urine when there are kidney problems. PSA has been proposed to function in a variety of processes, including metabolism of neuropeptide, regulation of the cell cycle, and hydrolysis of proteasomal products to amino acids. Besides, Protein Disulfide Isomerase A3 (PDIA3) has been identified as an interactor of PSA, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PSA and recombinant human PDIA3. Briefly, PSA were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to PDIA3-coated microtiter wells and incubated for 2h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-PSA pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of PSA and PDIA3 was shown in Figure 1, and this effect was in a dose dependent manner.



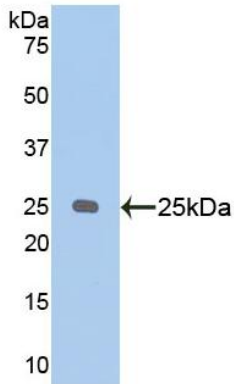
**Figure 1. The binding activity of PSA with PDIA3.**

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant PSA, Human**



**Figure 3. Western Blot**

**Sample: Recombinant PSA, Human;**

**Antibody: Rabbit Anti-Human PSA Ab (PAE206Hu01)**

**[ IMPORTANT NOTE ]**

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