

APA800Hu02 100µg

Active Pregnancy Associated Plasma Protein A (PAPPA)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Thr1270~Cys1558

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: 7.2

Predicted Molecular Mass: 33.2kDa

Accurate Molecular Mass: 34kDa 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]

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T EGKWNKQVAC EPVDCSIPDH HQVYAASFSC
PEGTTFGSQC SFQCRHPAQL KGNNLLTCM EDGLWSFPEA LCELMCLAPP
PVPNADLQTA RCRENKHKVG SFCKYKCKPG YHVPGSSRKS KKRAFKTQCT
QDGSWQEGAC VPVTCPPPP KFHGLYQCTN GFQFNSECRI KCEDSDASQG
LGSNVIHCRK DGTWNGSFHV CQEMQGQCSV PNELNSNLKL QCPDGYAIGS
ECATSCLDHN SESIILPMNV TVRDIPHWLN PTRVERVVCT AGLKWYPHPA
LIHCVKGC
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[ACTIVITY]

Pregnancy-associated plasma protein A (PAPPA), also known as pappalysin-1, is a secreted protease whose main substrate is insulin-like growth factor binding proteins. PAPPA's proteolytic function is activated upon collagen binding. It is thought to be involved in local proliferative processes such as wound healing and bone remodeling. Low plasma level of this protein has been suggested as a biochemical marker for pregnancies with aneuploid fetuses (fetuses with an abnormal number of chromosomes). Besides, Plasminogen (Plg) has been identified as an interactor of PAPPA, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PAPPA and recombinant human Plg. Briefly, PAPPA were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to Plg-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PAPPA 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 50 μ L stop solution to the wells and read at 450nm immediately. The binding activity of PAPP-A and Plg was shown in Figure 1, and this effect was in a dose dependent manner.

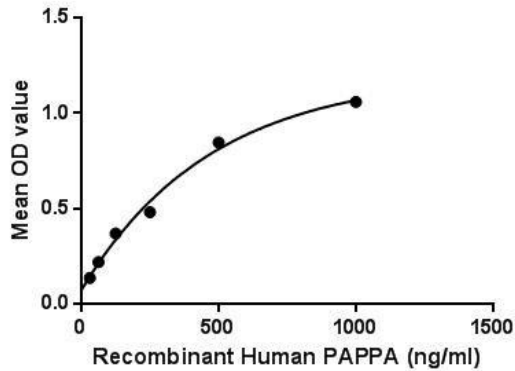


Figure 1. The binding activity of PAPP-A with Plg.

[IDENTIFICATION]

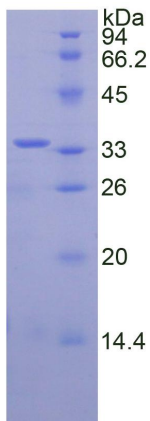


Figure 2. SDS-PAGE

Sample: Active recombinant PAPP-A, Human

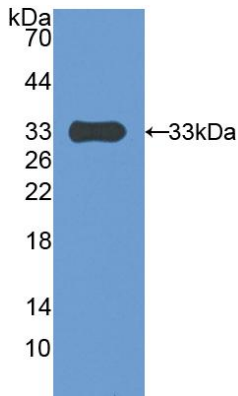


Figure 3. Western Blot

Sample: Recombinant PAPP A, Human;

Antibody: Rabbit Anti-Human PAPP A Ab (PAA800Hu02)

[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.