

## Pregnancy Associated Plasma Protein A (PAPPA) Active Protein | PAPPA active protein

Active Pregnancy Associated Plasma Protein A (PAPPA)

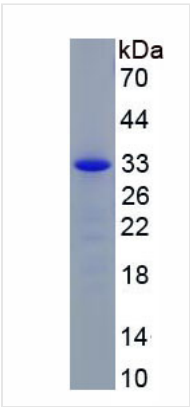
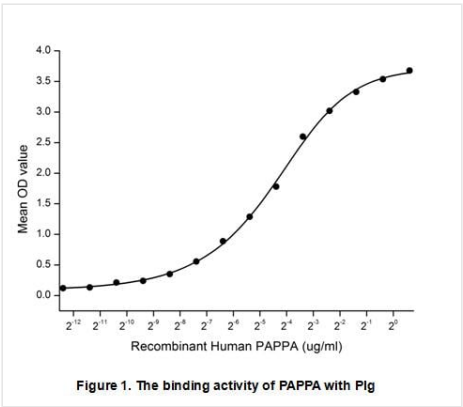
|                               |                       |                                                     |
|-------------------------------|-----------------------|-----------------------------------------------------|
| CATALOG #<br><b>AAA152234</b> | HOST<br><b>E Coli</b> | APPLICATIONS<br><b>Activity Assay, Cell Culture</b> |
|-------------------------------|-----------------------|-----------------------------------------------------|

### PRODUCT SYNONYMS

Pregnancy Associated Plasma Protein A (PAPPA); Active Pregnancy Associated Plasma Protein A (PAPPA); PAPPA/Pregnancy Associated Plasma Protein A; PAPP-A; PAPA; ASBAP2; DIPLA1; IGFBP-4ase; PAPPA1; Pappalysin 1; Insulin-Like Growth Factor Binding Protein-4 Protease; Differentially Placenta 1 Expressed Protein; PAPPA active protein

### PRODUCT SPECIFICATIONS

|                                                  |                                                                                                              |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Host                                             | E Coli                                                                                                       |
| Purity/Purification                              | Greater than 95% by SDS-PAGE                                                                                 |
| Form/Format                                      | PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.<br>Freeze-dried powder               |
| Sequence                                         | Leu317~Pro 532                                                                                               |
| Applicable Applications for PAPPA active protein | Activity Assay, Cell Culture                                                                                 |
| Species                                          | Human                                                                                                        |
| Isoelectric Point                                | 5.3                                                                                                          |
| Tag                                              | N-terminal His Tag                                                                                           |
| Endotoxin Level                                  | <1.0EU per 1ug (determined by the LAL method)                                                                |
| Reconstitution                                   | Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0mg/mL. Do not vortex.                          |
| Preparation and Storage                          | Store at 2-8 degree C for one month, -80 degree C for 12 months<br>Stable for 12 months if correctly stored. |



Bioactivity

Pregnancy-associated plasma protein A(PAPP-A), also known as pappalysin-1, is a secreted protease whose main substrate is insulin-like growth factor binding proteins. PAPP-A'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 PAPP-A, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PAPP-A and recombinant human Plg. Briefly, biotinylated PAPP-A were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100ul were then transferred to Plg-coated microtiter wells and incubated for 1 h at 37 degree C. Wells were washed 3 times with PBST and incubated for 0.5 h at 37 degree C with SA labelled HRP. After incubation with SA labelled HRP, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450/630 nm immediately. The binding activity of PAPP-A and Plg was shown in Figure 1, and the ED50 for this effect is 0.04936 ug/ml.

SDS-PAGE

SDS-PAGE

ADDITIONAL INFORMATION

|                                                     |                                                           |
|-----------------------------------------------------|-----------------------------------------------------------|
| Product Categories/Family for PAPP-A active protein | Reproductive science; Genetic science; Active proteins/AP |
|-----------------------------------------------------|-----------------------------------------------------------|

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                                                  |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 223590248                                                                                                                                                                                                                                                        |
| NCBI GeneID                      | 5069                                                                                                                                                                                                                                                             |
| UniProt Accession #              | Q13219; Q08371; Q68G52; Q9UDK7; B1AMF9                                                                                                                                                                                                                           |
| Molecular Weight                 | 180,973 Da                                                                                                                                                                                                                                                       |
| NCBI Official Full Name          | Pappalysin-1                                                                                                                                                                                                                                                     |
| NCBI Official Synonym Full Names | pregnancy-associated plasma protein A, pappalysin 1                                                                                                                                                                                                              |
| NCBI Official Symbol             | PAPP-A                                                                                                                                                                                                                                                           |
| NCBI Official Synonym Symbols    | PAPA; DIPLA1; PAPP-A; PAPP-A1; ASBABP2; IGFBP-4ase                                                                                                                                                                                                               |
| NCBI Protein Information         | pappalysin-1; IGF-dependent IGFBP-4 protease; aspecific BCL2 ARE-binding protein 2; pregnancy-associated plasma protein A; differentially placenta 1 expressed protein; insulin-like growth factor-dependent IGF binding protein-4 protease; insulin-like growth |
| UniProt Protein Name             | Pappalysin-1                                                                                                                                                                                                                                                     |
| UniProt Gene Name                | PAPP-A                                                                                                                                                                                                                                                           |
| UniProt Synonym Gene Names       | IGF-dependent IGFBP-4 protease; IGFBP-4ase; PAPP-A                                                                                                                                                                                                               |

**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://www.aaabiotech.com/e-coli-active-protein/pregnancy-associated-plasma-protein-a-pappa/152234>