

PAPP-A (B-7): sc-365226

BACKGROUND

Pregnancy-associated plasma protein-A (pappalysin-1 or PAPP-A), also known as Insulin-like growth factor-dependent IGF-binding protein 4 (IGFBP4) protease, is a member of the peptidase M43B family of proteins. PAPP-A, a metalloproteinase, cleaves Insulin-like growth factor binding proteins IGFBP4 and IGFBP5, releasing bound IGF. PAPP-A is primarily expressed in septa and anchoring villi in placenta and is also expressed in pregnancy serum. Levels of PAPP-A increase throughout pregnancy. Lower levels of expression can be detected in kidney, prostate, breast, ovary and endometrial tissues. PAPP-A is a secreted protein that can form homodimers; in pregnancy serum PAPP-A may also form a heterotetramer with PRG-2.

CHROMOSOMAL LOCATION

Genetic locus: PAPP (human) mapping to 9q33.1; Pappa (mouse) mapping to 4 C1.

SOURCE

PAPP-A (B-7) is a mouse monoclonal antibody raised against amino acids 666-840 mapping within an internal region of PAPP-A of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PAPP-A (B-7) is available conjugated to agarose (sc-365226 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365226 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365226 PE), fluorescein (sc-365226 FITC), Alexa Fluor[®] 488 (sc-365226 AF488), Alexa Fluor[®] 546 (sc-365226 AF546), Alexa Fluor[®] 594 (sc-365226 AF594) or Alexa Fluor[®] 647 (sc-365226 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365226 AF680) or Alexa Fluor[®] 790 (sc-365226 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PAPP-A (B-7) is recommended for detection of PAPP-A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PAPP-A siRNA (h): sc-61289, PAPP-A siRNA (m): sc-61290, PAPP-A shRNA Plasmid (h): sc-61289-SH, PAPP-A shRNA Plasmid (m): sc-61290-SH, PAPP-A shRNA (h) Lentiviral Particles: sc-61289-V and PAPP-A shRNA (m) Lentiviral Particles: sc-61290-V.

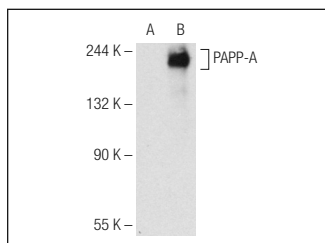
Molecular Weight of PAPP-A: 181 kDa.

Positive Controls: PAPP-A (m): 293 Lysate: sc-179290.

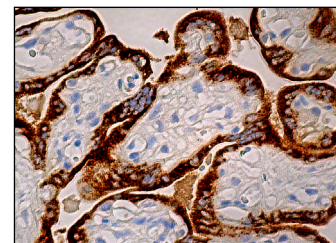
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PAPP-A (B-7): sc-365226. Western blot analysis of PAPP-A expression in non-transfected: sc-110760 (A) and mouse PAPP-A transfected: sc-179290 (B) 293 whole cell lysates.



PAPP-A (B-7): sc-365226. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Hsu, C.F., et al. 2019. IGF-axis confers transformation and regeneration of fallopian tube fimbria epithelium upon ovulation. *EBioMedicine* 41: 597-609.
- Mueller, S.K., et al. 2020. Significant polyomic and functional upregulation of the PAPP-A/IGFBP-4/5/IGF-1 axis in chronic rhinosinusitis with nasal polyps. *Int. Forum Allergy Rhinol.* 10: 546-555.
- Lu, Y., et al. 2021. PAPP-A functions as a tumor suppressor and is down-regulated in renal cell carcinoma. *FEBS Open Bio* 11: 1593-1606.
- Kim, S.H., et al. 2021. Porcine endometrial 3D co-culture: morphological changes in 3D endometrium tissues according to hormonal changes. *Histol. Histopathol.* 36: 833-844.
- Itoh, G., et al. 2022. Cancer-associated fibroblasts educate normal fibroblasts to facilitate cancer cell spreading and T cell suppression. *Mol. Oncol.* 16: 166-187.
- Zhong, Q., et al. 2022. Structural insights into the covalent regulation of PAPP-A activity by proMBP and STC2. *Cell Discov.* 8: 137.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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