

PAPP-A (H-175): sc-50518

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.

REFERENCES

- Kristensen, T., Oxvig, C., Sand, O., Møller, N.P. and Sottrup-Jensen, L. 1994. Amino acid from cloned cDNA. *Biochemistry* 33: 1592-1598.
- Fortune, J.E., Rivera, G.M. and Yang, M.Y. 2004. Follicular development: the role of the follicula of the dominant follicle. *Anim. Reprod. Sci.* 82-83: 109-126.
- Bunn, R.C., Green, L.D., Overgaard, M.T., Oxvig, C. and Fowlkes, J.L. 2004. IGFBP4 degradation by pregnancy-associated plasma protein-A in MC3T3 osteoblasts. *Biochem. Biophys. Res. Commun.* 325: 698-706.
- Kalli, K.R., Chen, B.K., Bale, L.K., Gernand, E., Overgaard, M.T., Oxvig, C., Cliby, W.A. and Conover, C.A. 2004. Pregnancy-associated plasma protein-A (PAPP-A) expression and Insulin-like growth factor binding protein-4 protease activity in normal and malignant ovarian surface epithelial cells. *Int. J. Cancer* 110: 633-640.
- Spicer, L.J. 2004. Proteolytic degradation of Insulin-like growth factor binding proteins by ovarian follicles: a control mechanism for selection of dominant follicles. *Biol. Reprod.* 70: 1223-1230.
- Santolaya-Forgas, J., De Leon, J.A., Cullen Hopkins, R., Castracane, V.D., Kauffman, R.P. and Sifuentes, G.A. 2004. Low pregnancy-associated plasma protein-A at 10⁺¹ to 14⁺⁶ weeks of gestation and a possible mechanism leading to miscarriage. *Fetal Diagn. Ther.* 19: 456-461.
- Santiago, C.A., Voge, J.L., Aad, P.Y., Allen, D.T., Stein, D.R., Malayer, J.R. and Spicer, L.J. 2004. protein mRNAs in granulosa cells of dominant and subordinate follicles of preovulatory cattle. *Domest. Anim. Endocrinol.* 28: 46-63.

CHROMOSOMAL LOCATION

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

SOURCE

PAPP-A (H-175) is a rabbit polyclonal antibody raised against amino acids 666-840 mapping within an internal region of PAPP-A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PAPP-A (H-175) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

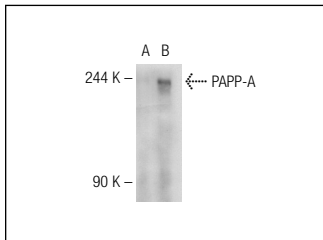
PAPP-A (H-175) is also recommended for detection of PAPP-A in additional species, including equine, canine, bovine and porcine.

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.

DATA



PAPP-A (H-175): sc-50518. 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
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Try **PAPP-A (B-7): sc-365226**, our highly recommended monoclonal alternative to PAPP-A (H-175).