



Human PAPP-A Polyclonal Antibody

Antigen Affinity-Purified Anti-Human PAPP-A Rabbit Antibody

Catalog Number: GR126171

Background

Pappalysin-1, also known as pregnancy-associated plasma protein A, is a protein encoded by the PAPP gene in humans.[1,2] PAPP is a secreted protease whose main substrate is insulin-like growth factor binding proteins (IGFBPs).[3] Pappalysin-1 is also used in screening tests for Down syndrome.[4] PAPP'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. For example, low PAPP may be commonly seen in prenatal screening for Down syndrome.[4] Low levels may alternatively predict issues with the placenta, resulting in adverse complications such as intrauterine growth restriction, preeclampsia, placental abruption, premature birth, or fetal death. PAPP-A has been shown to interact with major basic protein^{[2][4]} and specifically inhibits the third component of human complement (C3).[6] PAPP-A interacts with serine proteinases.[7] In STEMI patients, Stanniocalcin-2 and IGFBP-4 emerged as independent predictors of all-cause death and readmission due to HF. The Stanniocalcin-2/PAPP-A/IGFBP-4 axis exhibits a significant role in STEMI risk stratification.[8]

References

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2. Overgaard MT, et al. (2000) *J. Biol. Chem.* 275 (40): 31128–33.
3. Durham SK, et al. (1994). *J. Bone Miner. Res.* 9 (1): 111–7.
4. Breathnach FM, Malone FD (2007). *Curr. Opin. Obstet. Gynecol.* 19 (2): 176–82.
5. Overgaard MT, et al. (2003) *J. Biol. Chem.* 278 (4): 2106–17.
6. Bischof P, et al. (1984). *Placenta*. 5 (1): 1–7.
7. Zorin NA, et al. (1995). *Clin. Chim. Acta.* 239 (1): 47–55.
8. Cediel G, et al. (2018) *Cardiovasc Diabetol* 17 (1), 63



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Description

Species reactivity: Human

Specificity: Detects human PAPP-A in direct or indirect ELISAs and Western blots.

Source: Polyclonal rabbit IgG

Purification: Antigen Affinity purified

Immunogen: *E. coli* derived recombinant human PAPP-A, Thr857-Ala1088

Accession # NP_002572.2.

Endotoxin Level: <0.10 EU per 1 µg of the antibody by the LAL method.

Formulation: lyophilized from a solution containing PBS and trehalose (100 µg/ml).

Application

Reconstitution: Reconstitute at 0.2 mg/ml in sterile PBS

Recommended concentration:

Western blot: >0.1 µg/ml

Immunocytochemistry: 5-15 µg/ml

ELISA: 0.2-0.6 µg/ml

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months at -20°C.
- 1 month after reconstitution at 4 °C, from date of receipt.
- 6 months after reconstitution at -20°C to -70°C from date of receipt.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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