Human Pappalysin-2/PAPP-A2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1668

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Pappalysin-2/PAPP-A2 in direct ELISAs and Western blots. In Western blots, less than 1% cross-reactivity with recombinant human PAPP-A is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Pappalysin-2/PAPP-A2 Ser234-Cys1396 Accession # Q9BXP8
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Pappalysin-2/PAPP-A2 (Catalog # 1668-ZN)
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Pappalysin-2/PAPP-A2 (Catalog # 1668-ZN), see our available Western blot detection antibodies

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Pappalysins belong to a fifth family of metzincins that consists of ADAMs/ADAMTSs, MMPs, astacins and serrylysins (1, 2). PAPP-A is an important pregnancy protein and increases in plasma by a factor of about 150 during pregnancy as compared to the nonpregnant state. PAPP-A is also a major marker of Down syndrome in the first trimester of pregnancy because maternal serum levels of PAPP-A are significantly reduced when a fetus affected by Down syndrome is present (3). PAPP-A cleaves Insulin-like Growth Factor-Binding Protein-4 and -5 (IGFBP-4 and -5) at a single site, resulting in the release of bioactive IGF (4). Compared to PAPP-A, PAPP-A2 (also called PAPP-E), the second member of the family is less characterized. PAPP-A2 shares 45% amino acid identity to PAPP-A in the mature form, which is synthesized as a preproprotein consisting of multiple domains (1). The prepro region (residues 1-233) and the C-terminal region (residues 1397-1791) are not included in recombinant human PAPP-A2. As an active protease, recombinant human PAPP-A2 cleaves IGFBP-5.

References:

1. Overgaard, M.T. *et al.* (2001) J. Biol. Chem. **276**:21849.
2. Boldt, H.B. *et al.* (2001) Biochem. J. **358**:359.
3. Fialova L. and I.M. Malbohan (2002) Bratisl. Lek. Listy **103**:194.
4. Laursen, L.S. *et al.* (2001) FEBS Lett. **504**:36.

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