BACKGROUND

Pregnancy-associated plasma protein-A (Pappalysin-1 or PAPP-A), also known as insulin-like growth factor-dependent IGFBP-binding protein 4 (IGFBP-4) protease, is a member of the peptidase M43B family of proteins. PAPP-A, a metalloproteinase, cleaves insulin-like growth factor binding proteins IGFBP-4 and IGFBP-5 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 PRG2.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: PAPPA (human) mapping to 9q33.2.

SOURCE

PAPP-A (5E743) is a mouse monoclonal antibody raised against purified human PAPP-A.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PAPP-A (5E743) is recommended for detection of PAPP-A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]. Suitable for use as control antibody for PAPP-A siRNA (h): sc-61289, PAPP-A shRNA Plasmid (h): sc-61289-SH and PAPP-A shRNA (h) Lentiviral Particles: sc-61289-V.

Molecular Weight of PAPP-A: 181 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

![Western blot analysis of human recombinant PAPP-A protein](image)

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.