

PAP21 (Y-15): sc-243735

BACKGROUND

PAP21 (protease-associated domain-containing protein of 21 kDa), also known as PRADC1 (protease-associated domain containing 1), is a 188 amino acid secreted protein that contains one PA (protease associated) domain. Highly expressed in skeletal muscle, heart and liver, PAP21 is also expressed at an intermediate level in kidney. N-glycosylated, PAP21 is required for efficient secretion. The PAP21 gene is conserved in chimpanzee, canine, bovine, mouse, chicken and fruit fly, and maps to human chromosome 2p13.2. The second largest human chromosome 2 consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene.

REFERENCES

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3. Zhou, Y.B., et al. 2004. N-glycosylation is required for efficient secretion of a novel human secreted glycoprotein, hPAP21. *FEBS Lett.* 576: 401-407.
4. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. *Dermatology* 215: 155-159.
6. Marshall, J.D., et al. 2007. Alström syndrome. *Eur. J. Hum. Genet.* 15: 1193-1202.
7. Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. *Hum. Mutat.* 28: 1114-1123.
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CHROMOSOMAL LOCATION

Genetic locus: PRADC1 (human) mapping to 2p13.2; Pradc1 (mouse) mapping to 6 C3.

SOURCE

PAP21 (Y-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PAP21 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-243735 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAP21 (Y-15) is recommended for detection of PAP21 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PAP21 (Y-15) is also recommended for detection of PAP21 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PAP21 siRNA (h): sc-94713, PAP21 siRNA (m): sc-152012, PAP21 shRNA Plasmid (h): sc-94713-SH, PAP21 shRNA Plasmid (m): sc-152012-SH, PAP21 shRNA (h) Lentiviral Particles: sc-94713-V and PAP21 shRNA (m) Lentiviral Particles: sc-152012-V.

Molecular Weight of PAP21: 21 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.