SANTA CRUZ BIOTECHNOLOGY, INC.

NPT1 (H-75): sc-67132

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The Power to Question

BACKGROUND

NPT1, also called sodium-dependent phosphate transport protein, belongs to the organic anion transporter family, SLC17A. It is mainly expressed in the kidney transporting small organic anions such as PAH (para-aminohippurate), but it is also found in the liver and brain. NTP1 localizes to the apical membrane of renal proximal tubular cells and functions as a voltage driven organic anion/Cl-exchanger. It also plays a role in maintaining phosphate homeostasis. The expression of NPT1 is transcriptionally regulated by HNF-1α and HNF-3β. Indomethacin and salicylate inhibit NPT1-mediated PAH transport.

REFERENCES

1. Chong, S.S., et al. 1993. Molecular cloning of the cDNA encoding a human renal sodium phosphate transport protein and its assignment to chromosome 6p21.3-p23. Genomics 18: 355-359.
2. Chong, S.S., et al. 1995. Cloning, genetic mapping, and expression analysis of a mouse renal sodium-dependent phosphate cotransporter. Am. J. Physiol. 268: F1038-1045.
3. Kos, C.H., et al. 1996. Comparative mapping of Na^+-phosphate cotransporter genes, NPT1 and NPT2, in human and rabbit. Cytogenet. Cell Genet. 75: 22-24.
4. Uchino, H., et al. 2000. P-aminohippuric acid transport at renal apical membrane mediated by human inorganic phosphate transporter NPT1. Biochem. Biophys. Res. Commun. 270: 254-259.
5. Soumounou, Y., et al. 2001. Murine and human type I Na-phosphate cotransporter genes: structure and promoter activity. Am. J. Physiol. Renal. Physiol. 281: F1082-1091.

CHROMOSOMAL LOCATION

Genetic locus: SLC17A1 (human) mapping to 6p22.2.

SOURCE

NPT1 (H-75) is a rabbit polyclonal antibody raised against amino acids 1-75 mapping at the N-terminus of NPT1 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.

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.

APPLICATIONS

NPT1 (H-75) is recommended for detection of NPT1 of 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).

Suitable for use as control antibody for NPT1 siRNA (h): sc-40139, NPT1 shRNA Plasmid (h): sc-40139-SH and NPT1 shRNA (h) Lentiviral Particles: sc-40139-V.

Molecular Weight of NPT1: 51 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

MONOS Satisfaction Guaranteed

Try **NPT1 (4B4D1): sc-517230**, our highly recommended monoclonal alternative to NPT1 (H-75).