



NPT1 (K-12): sc-46566

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. NPT1 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-1 α and HNF-3 β . Indomethacin and salicylate inhibit NPT1-mediated PAH transport.

REFERENCES

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. SWISS-PROT/TrEMBL (Q14916). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: SLC17A1 (human) mapping to 6p21.3; Slc17a1 (mouse) mapping to 13 A3-A4.

SOURCE

NPT1 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NPT1 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46566 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NPT1 (K-12) is recommended for detection of NPT1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for NPT1 siRNA (m): sc-40140.

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.

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.