

NPT2c (S-17): sc-163166

BACKGROUND

NPT2c (Na⁺-dependent phosphate cotransporter 2C), also known as SLC34A3 (solute carrier family 34 member 3), is a 599 amino acid multi-pass membrane protein that maintains inorganic phosphate concentration at the kidney by assisting in the active transport of phosphate through the renal brush border membrane. A member of the SLC34A transporter family, NPT2c is encoded by a gene that maps to human chromosome 9q34.3. Defects in the NPT2c gene are the cause of hereditary hypophosphatemic rickets with hypercalciuria (HHRH), an autosomal recessive disease characterized by rickets, hypophosphatemia and decreased renal phosphate reabsorption.

REFERENCES

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2. Segawa, H., et al. 2002. Growth-related renal type II Na/Pi cotransporter. *J. Biol. Chem.* 277: 19665-19672.
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4. Lorenz-Depiereux, B., et al. 2006. Hereditary hypophosphatemic rickets with hypercalciuria is caused by mutations in the sodium-phosphate cotransporter gene SLC34A3. *Am. J. Hum. Genet.* 78: 193-201.
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6. Forster, I.C., et al. 2006. Proximal tubular handling of phosphate: A molecular perspective. *Kidney Int.* 70: 1548-1559.
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CHROMOSOMAL LOCATION

Genetic locus: SLC34A3 (human) mapping to 9q34.3; Slc34a3 (mouse) mapping to 2 A3.

SOURCE

NPT2c (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of NPT2c 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.

Blocking peptide available for competition studies, sc-163166 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

NPT2c (S-17) is recommended for detection of NPT2c of mouse, rat and 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); non cross-reactive with NPT2 of NPT2b.

NPT2c (S-17) is also recommended for detection of NPT2c in additional species, including canine and bovine.

Suitable for use as control antibody for NPT2c siRNA (h): sc-92956, NPT2c siRNA (m): sc-150057, NPT2c shRNA Plasmid (h): sc-92956-SH, NPT2c shRNA Plasmid (m): sc-150057-SH, NPT2c shRNA (h) Lentiviral Particles: sc-92956-V and NPT2c shRNA (m) Lentiviral Particles: sc-150057-V.

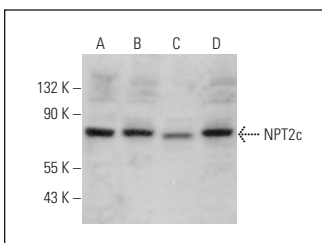
Molecular Weight of NPT2c: 64 kDa.

Positive Control: COLO 205 whole cell lysate: sc-364177, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



NPT2c (S-17): sc-163166. Western blot analysis of NPT2c expression in COLO 205 (A), HeLa (B), NIH/3T3 (C) and HEK293 (D) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.