

NTCP (H-42): sc-98484

BACKGROUND

NTCP (Na⁺/taurocholate transport protein), also known as SLC10A1 (solute carrier family 10 (sodium/bile acid cotransporter family), member 1), is a 349 amino acid multi-pass membrane protein that belongs to the sodium/bile acid symporter family of cotransporters. Localized to the basolateral membranes of hepatocytes, NTCP plays a role in the hepatic sodium/bile acid uptake system, which functions as a substrate-specific, sodium-dependent transporter of both bile and non-bile organic compounds. The gene encoding NTCP maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the Presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

- Hagenbuch, B., et al. 1994. Molecular cloning, chromosomal localization, and functional characterization of a human liver Na⁺/bile acid cotransporter. *J. Clin. Invest.* 93: 1326-1331.
- Green, R.M., et al. 1998. Genetic mapping of the Na⁺-taurocholate cotransporting polypeptide to mouse chromosome 12. *Mamm. Genome* 9: 598.
- Shiao, T., et al. 2000. Structural and functional characterization of liver cell-specific activity of the human sodium/taurocholate cotransporter. *Genomics* 69: 203-213.
- Hallén, S., et al. 2002. Organization of the membrane domain of the human liver sodium/bile acid cotransporter. *Biochemistry* 41: 7253-7266.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 182396. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Trauner, M., et al. 2003. Bile salt transporters: molecular characterization, function, and regulation. *Physiol. Rev.* 83: 633-671.

CHROMOSOMAL LOCATION

Genetic locus: SLC10A1 (human) mapping to 14q24.2; Slc10a1 (mouse) mapping to 12 D1.

SOURCE

NTCP (H-42) is a rabbit polyclonal antibody raised against amino acids 241-282 mapping within an internal region of NTCP of human origin.

PRODUCT

Each vial contains 200 μ g 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.

APPLICATIONS

NTCP (H-42) is recommended for detection of NTCP of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NTCP (H-42) is also recommended for detection of NTCP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NTCP siRNA (h): sc-92260, NTCP siRNA (m): sc-150086, NTCP shRNA Plasmid (h): sc-92260-SH, NTCP shRNA Plasmid (m): sc-150086-SH, NTCP shRNA (h) Lentiviral Particles: sc-92260-V and NTCP shRNA (m) Lentiviral Particles: sc-150086-V.

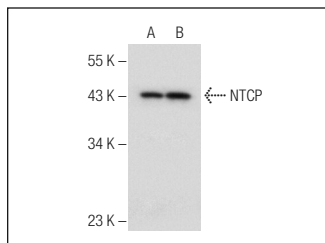
Molecular Weight of NTCP: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human liver extract: sc-363766 or HT-1080 whole cell lysate: sc-364183.

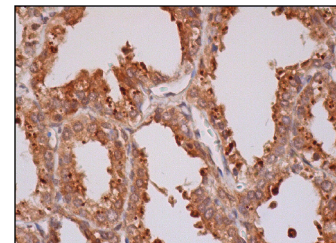
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



NTCP (H-42): sc-98484. Western blot analysis of NTCP expression in Hep G2 whole cell lysate (A) and human liver tissue extract (B).



NTCP (H-42): sc-98484. Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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