SANTA CRUZ BIOTECHNOLOGY, INC.

NTCP (D-5): sc-518115

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 presinilin 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 α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

CHROMOSOMAL LOCATION

Genetic locus: SLC10A1 (human) mapping to 14q24.2.

SOURCE

NTCP (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 138-161 within an internal region of NTCP of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NTCP (D-5) is available conjugated to agarose (sc-518115 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518115 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518115 PE), fluorescein (sc-518115 FITC), Alexa Fluor® 488 (sc-518115 AF488), Alexa Fluor® 546 (sc-518115 AF546), Alexa Fluor® 594 (sc-518115 AF594) or Alexa Fluor® 647 (sc-518115 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518115 AF680) or Alexa Fluor® 790 (sc-518115 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NTCP (D-5) is recommended for detection of NTCP of human origin by Western Blotting (starting dilution 1:100, 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).

NTCP (D-5) is also recommended for detection of NTCP in additional species, including bovine.

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

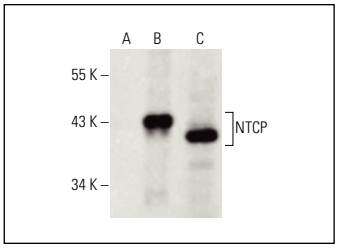
Molecular Weight of NTCP: 38 kDa.

Positive Controls: NTCP (h2): 293T Lysate: sc-373067 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NTCP (D-5): sc-518115. Western blot analysis of NTCP expression in non-transfected 293T: sc-117752 (**A**), human NTCP transfected 293T: sc-373067 (**B**) and Hep G2 (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

SELECT PRODUCT CITATIONS

1. Luo, S., et al. 2021. Functional hit 1 (FH1)-based rapid and efficient generation of functional hepatocytes from human mesenchymal stem cells: a novel strategy for hepatic differentiation. Ann. Transl. Med. 9: 1087.
2. Jiao, Q., et al. 2021. NLRX1 can counteract innate immune response induced by an external stimulus favoring HBV infection by competitive inhibition of MAVS-RLRs signaling in HepG2-NTCP cells. Sci. Prog. 104: 368504211058036.
3. Lim, H.Y., et al. 2022. Tumor suppressor p53 inhibits hepatitis B virus replication by downregulating HBx via E6AP-mediated proteasomal degradation in human hepatocellular carcinoma cell lines. Viruses 14: 2313.
4. Liang, P., et al. 2022. Obeticholic acid improved triptolide/lipopolysaccharide-induced hepatotoxicity by inhibiting caspase-11-GSDMD pyroptosis pathway. J. Appl. Toxicol. E-published.

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.