

# NPC1L1 (N-13): sc-49063

## BACKGROUND

Niemann-Pick disease type C (NPC) is an autosomal recessive disease characterized by the accumulation of unesterified cholesterol in the endosomal/lysosomal system, which results in progressive neurodegeneration and death. Niemann-Pick C1-like protein 1 precursor, or NPC1L1, is a membrane protein involved in the uptake of cholesterol at the intestinal enterocyte across the plasma membrane. NPC1L1 is widely expressed and is the target of ezetimibe, a drug involved in the inhibition of cholesterol absorption. In human, mouse and rat, small intestine tissue shows the highest level of NPC1L1 expression; expression in other tissues includes gallbladder, liver, testis and stomach. The NPC1L1 gene contains 20 exons, with an unusually large 1,526 bp exon 2, and spans approximately 29 kb. The presumed promoter region of the gene harbors a sterol-regulatory element (SRE) for SRE-binding protein, further suggesting that NPC1L1 may play a role in subcellular cholesterol homeostasis.

## REFERENCES

1. Davies, J.P., et al. 2005. Inactivation of NPC1L1 causes multiple lipid transport defects and protects against diet-induced hypercholesterolemia. *J. Biol. Chem.* 280: 12710-12720.
2. Garcia-Calvo, M., et al. 2005. The target of ezetimibe is Niemann-Pick C1-like 1 (NPC1L1). *Proc. Natl. Acad. Sci. USA* 102: 8132-8137.

## CHROMOSOMAL LOCATION

Genetic locus: NPC1L1 (human) mapping to 7p13.

## SOURCE

NPC1L1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NPC1L1 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-49063 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NPC1L1 (N-13) is recommended for detection of NPC1L1 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), 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).

Suitable for use as control antibody for NPC1L1 siRNA (h): sc-61225, NPC1L1 shRNA Plasmid (h): sc-61225-SH and NPC1L1 shRNA (h) Lentiviral Particles: sc-61225-V.

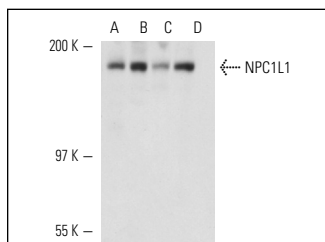
Molecular Weight of NPC1L1: 145 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Caco-2 cell lysate: sc-2262 or MIA PaCa-2 cell lysate: sc-2285.

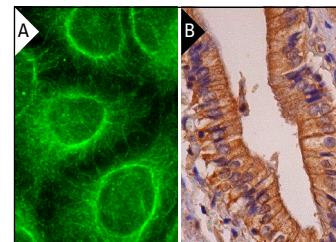
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



NPC1L1 (N-13): sc-49063. Western blot analysis of NPC1L1 expression in Hep G2 (A), Caco-2 (B), MIA PaCa-2 (C) and HeLa (D) whole cell lysates.



NPC1L1 (N-13): sc-49063. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells (B).

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **NPC1L1 (G-1): sc-166802**, our highly recommended monoclonal alternative to NPC1L1 (N-13).