SANTA CRUZ BIOTECHNOLOGY, INC.

TGN38 (H-300): sc-33783

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The Power to Question

BACKGROUND

TGN38 (*trans*-Golgi network protein 2) is a type I integral membrane protein that constitutively cycles between the TGN and plasma membrane where it partitions nascent proteins into carrier vesicles for transport to appropriate destinations in the cell. The cytosolic domain of TGN38 interacts with AP2 Clathrin adaptor complexes via the tyrosine-containing motif (-SDYQRL-) to direct internalization from the plasma membrane. N- and O-linked oligosaccharide chains attach to the 38 kDa core TGN38 protein to produce a protein present in brain, lung and kidney.

REFERENCES

1. Luzio, J.P., et al. 1990. Identification, sequencing and expression of an integral membrane protein of the *trans*-Golgi network (TGN38). Biochem. J. 270: 97-102.
2. Ghosh, R.N., et al. 1998. An endocytosed TGN38 chimeric protein is delivered to the TGN after trafficking through the endocytic recycling compartment in CHO cells. J. Cell Biol. 142: 923-936.
3. Stephens, D.J., et al. 1999. Direct interaction of the *trans*-Golgi network membrane protein, TGN38, with the F-Actin binding protein, neurabin. J. Biol. Chem. 274: 30080-30086.
4. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603062. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Lee, S.S., et al. 2002. Characterisation of the lumenal domain of TGN38 and effects of elevated expression of TGN38 on glycoprotein secretion. Eur. J. Cell Biol. 81: 609-621.

CHROMOSOMAL LOCATION

Genetic locus: TGOLN2 (human) mapping to 2p11.2.

SOURCE

TGN38 (H-300) is a rabbit polyclonal antibody raised against amino acids 21-320 mapping within an internal region of TGN38 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.

APPLICATIONS

TGN38 (H-300) is recommended for detection of precursor and mature TGN38, and isoforms TGN46, 48 and 51 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).

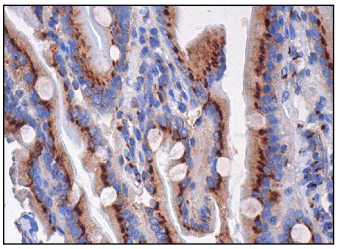
Molecular Weight of TGN38: 38 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

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



TGN38 (H-300): sc-33783. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Giles, D.K., et al. 2008. Trafficking of chlamydial antigens to the endoplasmic reticulum of infected epithelial cells. Microbes Infect. 10: 1494-1503.

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.