SANTA CRUZ BIOTECHNOLOGY, INC.

TGN38 (G-9): sc-271624

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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 core TGN38 protein to produce a protein present in brain, lung and kidney.

REFERENCES

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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. and Banting, G. 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. Lee, S.S. and Banting, G. 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.
5. Bauer, R.A., et al. 2004. Retention and stimulus-dependent recycling of dense core vesicle content in neuro-endocrine cells. J. Cell Sci. 117: 2193-2202.
6. Saint-Pol, A., et al. 2004. Clathrin adaptor epsinR is required for retrograde sorting on early endosomal membranes. Dev. Cell 6: 525-538.
7. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 603062. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
8. LocusLink Report (LocusID: 10618). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: TGOLN2 (human) mapping to 2p11.2; Tgoln1/Tgoln2 (mouse) mapping to 6 C1.

SOURCE

TGN38 (G-9) is a mouse monoclonal antibody raised against amino acids 18-307 mapping within an extracellular domain of TGN38 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 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

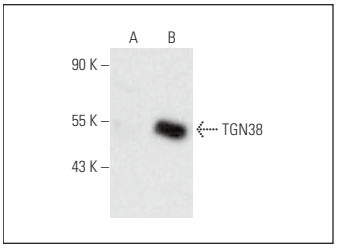
TGN38 (G-9) is recommended for detection of precursor and mature TGN38A and TGN38B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TGN38 siRNA (h): sc-44148,TGN38 siRNA (m): sc-44806, TGN38 shRNA Plasmid (h): sc-44148-SH, TGN38 shRNA Plasmid (m): sc-44806-SH, TGN38 shRNA (h) Lentiviral Particles: sc-44148-V and TGN38 shRNA (m) Lentiviral Particles: sc-44806-V.

Molecular Weight of TGN38: 38 kDa.

Positive Controls: mouse brain extract: sc-2253, TGN38 (m): 293T Lysate: sc-124027 or c4 whole cell lysate: sc-364186.

DATA



TGN38 (G-9): sc-271624. Western blot analysis of TGN38 expression in non-transfected: sc-117752 (**A**) and mouse TGN38 transfected: sc-124027 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Goulidaki, N., et al. 2015. RhoB is a component of the human cytomega-lovirus assembly complex and is required for efficient viral production. Cell Cycle 14: 2748-2763.
2. Jian, J., et al. 2016. Progranulin recruits HSP 70 to β-glucocerebrosidase and is therapeutic against gaucher disease. EBioMedicine 13: 212-224.
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4. Haziza, S., et al. 2017. Fluorescent nanodiamond tracking reveals intraneuronal transport abnormalities induced by brain-disease-related genetic risk factors. Nat. Nanotechnol. 12: 322-328.
5. Iacono, A., et al. 2020. Class IA PI3Ks regulate subcellular and functional dynamics of IDO1. EMBO Rep. 21: e49756.

RESEARCH USE

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

PROTOCOLS

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