

TGN38 (A-5): sc-166224

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

1. Luzio, J.P., Brake, B., Banting, G., Howell, K.E., Braghetta, P. and Stanley, K.K. 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., Mallet, W.G., Soe, T.T., McGraw, T.E. and Maxfield, F.R. 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 luminal domain of TGN38 and effects of elevated expression of TGN38 on glycoprotein secretion. *Eur. J. Cell Biol.* 81: 609-621.
5. Bauer, R.A., Overlease, R.L., Lieber, J.L. and Angleson, J.K. 2004. Retention and stimulus-dependent recycling of dense core vesicle content in neuroendocrine cells. *J. Cell Sci.* 117: 2193-2202.
6. Saint-Pol, A., Yélamos, B., Amessou, M., Mills, I.G., Dugast, M., Tenza, D., Schu, P., Antony, C., McMahon, H.T., Lamaze, C. and Johannes, L. 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/>

CHROMOSOMAL LOCATION

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

SOURCE

TGN38 (A-5) is a mouse monoclonal antibody raised against amino acids 21-320 mapping within an internal region of TGN38 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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 (A-5) is recommended for detection of precursor and mature TGN38 and isoforms TGN46, 48 and 51 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).

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

Molecular Weight of TGN38: 38 kDa.

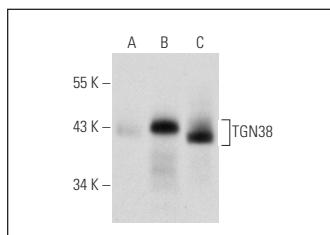
Positive Controls: TGN38 (h): 293T Lysate: sc-114787 or SK-N-MC cell lysate: sc-2237.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG_κ BP-HRP: sc-516102 or m-IgG_κ 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-IgG_κ BP-FITC: sc-516140 or m-IgG_κ 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



TGN38 (A-5): sc-166224. Western blot analysis of TGN38 expression in non-transfected 293T: sc-117752 (A), human TGN38 transfected 293T: sc-114787 (B) and SK-N-MC (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Baird, N.L., York, J. and Nunberg, J.H. 2012. Arenavirus infection induces discrete cytosolic structures for RNA replication. *J. Virol.* 86: 11301-11310.
2. Riggs, K.A., Hasan, N., Humphrey, D., Raleigh, C., Nevitt, C., Corbin, D. and Hu, C. 2012. Regulation of integrin endocytic recycling and chemotactic cell migration by Syntaxin 6 and VAMP3 interaction. *J. Cell Sci.* 125: 3827-3839.

RESEARCH USE

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