

Syntaxin 18 (10): sc-293067

BACKGROUND

Correct vesicular transport is essential to the survival of eukaryotic cells. This process is determined by specific pairing of vesicle-associated SNAREs (v-SNAREs) with those on the target membrane (t-SNAREs). This complex then recruits soluble NSF attachment proteins (SNAPs) and N-ethylmaleimide-sensitive factor (NSF) to form the highly stable SNAP receptor (SNARE) complex. The formation of a SNARE complex pulls the vesicle and target membrane together and may provide the energy to drive fusion of the lipid bilayers. Syntaxins, a family of proteins involved in the fusion of synaptic vesicles with the plasma membrane, display broad tissue distribution and contain carboxy-terminal hydrophobic domains that direct themselves to their respective intracellular compartments. Syntaxin 18 mainly localizes to the endoplasmic reticulum (ER), and functions in transport between the ER and Golgi. Syntaxin 18 also plays a role in ER-mediated phagocytosis, possibly by regulating the specific fusion of the ER and plasma or phagosomal membranes.

CHROMOSOMAL LOCATION

Genetic locus: STX18 (human) mapping to 4p16.3; Stx18 (mouse) mapping to 5 B3.

SOURCE

Syntaxin 18 (10) is a mouse monoclonal antibody raised against amino acids 220-331 of Syntaxin 18 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Syntaxin 18 (10) is available conjugated to agarose (sc-293067 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-293067 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

Syntaxin 18 (10) is recommended for detection of Syntaxin 18 of mouse, rat, human and canine 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Syntaxin 18 siRNA (h): sc-63092, Syntaxin 18 siRNA (m): sc-63093, Syntaxin 18 shRNA Plasmid (h): sc-63092-SH, Syntaxin 18 shRNA Plasmid (m): sc-63093-SH, Syntaxin 18 shRNA (h) Lentiviral Particles: sc-63092-V and Syntaxin 18 shRNA (m) Lentiviral Particles: sc-63093-V.

Molecular Weight of Syntaxin 18: 42 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, HeLa whole cell lysate: sc-2200 or BC₃H1 cell lysate: sc-2299.

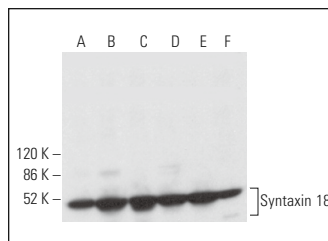
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

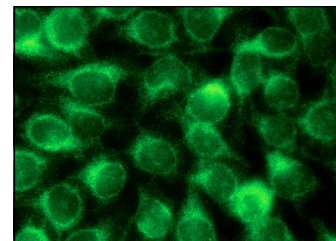
RESEARCH USE

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

DATA



Syntaxin 18 (10): sc-293067. Western blot analysis of Syntaxin 18 expression in HeLa (A), A-673 (B), Neuro-2A (C), C2C12 (D) and BC₃H1 (E) whole cell lysates and rat brain tissue extract (F).



Syntaxin 18 (10): sc-293067. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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- Xu, D., et al. 2018. Rab18 promotes lipid droplet (LD) growth by tethering the ER to LDs through SNARE and NRZ interactions. *J. Cell Biol.* 217: 975-995.
- Papadopoulos, A.A., et al. 2019. Signal peptide peptidase-like 2c (SPPL2c) impairs vesicular transport and cleavage of SNARE proteins. *EMBO Rep.* 20: e46451.
- Roy Chowdhury, S., et al. 2020. ER arrival sites associate with ER exit sites to create bidirectional transport portals. *J. Cell Biol.* 219: e201902114.
- Hirata, Y., et al. 2022. ER-to-Golgi trafficking of procollagen III via conventional vesicular and tubular carriers. *Mol. Biol. Cell* 33: ar21.
- Thumser-Henner, C., et al. 2022. Syntaxin 18 regulates the DNA damage response and epithelial-to-mesenchymal transition to promote radiation resistance of lung cancer. *Cell Death Dis.* 13: 529.
- Fu, Y., et al. 2023. Qa-SNARE syntaxin 18 mediates lipid droplet fusion with SNAP23 and SEC22B. *Cell Discov.* 9: 115.
- Yuan, Z., et al. 2024. ATG14 targets lipid droplets and acts as an autophagic receptor for syntaxin18-regulated lipid droplet turnover. *Nat. Commun.* 15: 631.

PROTOCOLS

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