

Syntaxin 4 (QQ-17): sc-101301



The Power to Question

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 4 is crucial for normal Insulin-stimulated glucose uptake in skeletal muscle and decreases in Syntaxin 4 protein levels result in reduction of whole-body Insulin-stimulated glucose metabolism.

REFERENCES

1. Bennett, M.K., et al. 1993. The Syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
2. Nagahama, M., et al. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.

CHROMOSOMAL LOCATION

Genetic locus: STX4 (human) mapping to 16p11.2; Stx4a (mouse) mapping to 7 F3.

SOURCE

Syntaxin 4 (QQ-17) is a mouse monoclonal antibody raised against a partial recombinant protein mapping to an internal region of Syntaxin 4 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Syntaxin 4 (QQ-17) is recommended for detection of Syntaxin 4 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Syntaxin 4 siRNA (h): sc-36590, Syntaxin 4 siRNA (m): sc-36591, Syntaxin 4 shRNA Plasmid (h): sc-36590-SH, Syntaxin 4 shRNA Plasmid (m): sc-36591-SH, Syntaxin 4 shRNA (h) Lentiviral Particles: sc-36590-V and Syntaxin 4 shRNA (m) Lentiviral Particles: sc-36591-V.

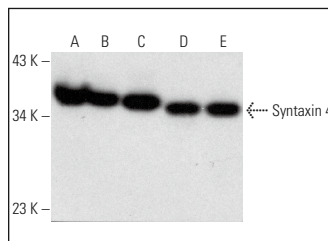
Molecular Weight of Syntaxin 4: 34 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or Syntaxin 4 (m2): 293T Lysate: sc-127624.

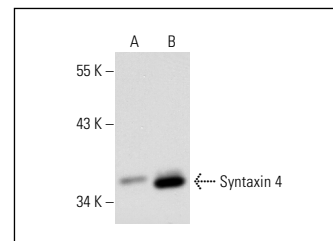
STORAGE

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

DATA



Syntaxin 4 (QQ-17): sc-101301. Western blot analysis of Syntaxin 4 expression in HeLa (A), Jurkat (B), A-431 (C), RAW 264.7 (D) and NIH/3T3 (E) whole cell lysates.



Syntaxin 4 (QQ-17): sc-101301. Western blot analysis of Syntaxin 4 expression in non-transfected: sc-117752 (A) and mouse Syntaxin 4 transfected: sc-127624 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Du, K. and Yingmin, S. 2015. ClipR-59 plays a critical role in the regulation of body glucose homeostasis. *Adipocyte* 4: 286-294.
2. Yoo, M., et al. 2015. Syntaxin 4 regulates the surface localization of a promyogenic receptor Cdo thereby promoting myogenic differentiation. *Skelet. Muscle* 5: 28.
3. Kochounian, H., et al. 2016. Targeting of exon VI-skipping human RGR-opsin to the plasma membrane of pigment epithelium and co-localization with terminal complement complex C5b-9. *Mol. Vis.* 22: 213-223.
4. Pietrobon, C.B., et al. 2020. Early weaning induces short- and long-term effects on pancreatic islets in wistar rats of both sexes. *J. Physiol.* 598: 489-502.
5. Pietrobon, C.B., et al. 2021. Pancreatic steatosis in adult rats induced by nicotine exposure during breastfeeding. *Endocrine* 72: 104-115.
6. Nugues, C., et al. 2022. Lysosome exocytosis is required for mitosis in mammalian cells. *Biochem. Biophys. Res. Commun.* 626: 211-219.
7. Li, L., et al. 2022. Ferroportin-dependent ferroptosis induced by ellagic acid retards liver fibrosis by impairing the SNARE complexes formation. *Redox Biol.* 56: 102435.
8. Weimershaus, M., et al. 2023. Mast cell-mediated inflammation relies on Insulin-regulated aminopeptidase controlling cytokine export from the Golgi. *J. Allergy Clin. Immunol.* 151: 1595-1608.e6.
9. Rocha, S.M., et al. 2023. Proteomic analysis of STEAP1 knockdown in human LNCaP prostate cancer cells. *Biochim. Biophys. Acta Mol. Cell Res.* 1870: 119522.
10. Sennett, C., et al. 2024. α -synuclein deletion impairs platelet function: a role for SNARE complex assembly. *Cells* 13: 2089.

RESEARCH USE

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