

Syntaxin 4 (QQ-17): sc-101301

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.

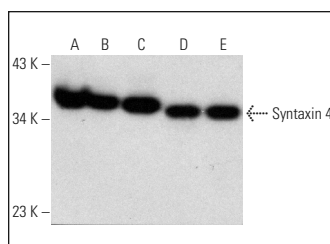
Molecular Weight of Syntaxin 4: 34 kDa.

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

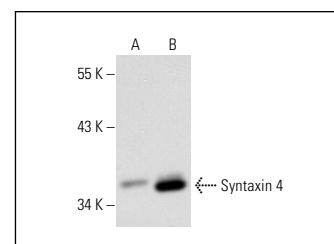
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



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. 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. Pietrobbon, 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. Guo, J.W., et al. 2020. Hepatocyte TMEM16A deletion retards NAFLD progression by ameliorating hepatic glucose metabolic disorder. *Adv. Sci.* 7: 1903657.

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.