

Syntaxin 3 (H-33): sc-135259

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 3 localizes to the apical plasma membrane and is involved in membrane fusion of apical trafficking pathways. Syntaxin 3 is a key factor in the growth of neurites, and it also functions as a direct target for arachidonic acid. Human Syntaxin 3 has two forms: Syntaxin 3A and 3B, while the mouse version has four forms: 3A, 3B, 3C and 3D.

REFERENCES

- Bennett, M.K., et al. 1993. The syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
- Nagahama, M., et al. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.
- Lowe, S.L., et al. 1997. A SNARE involved in protein transport through the Golgi apparatus. *Nature* 389: 881-884.
- Bentz, J. and Mittal, A. 2000. Deployment of membrane fusion protein domains during fusion. *Cell Biol. Int.* 24: 819-838.
- Watson, R.T. and Pessin, J.E. 2001. Transmembrane domain length determines intracellular membrane compartment localization of Syntaxins 3, 4, and 5. *Am. J. Physiol., Cell Physiol.* 281: C215-C223.
- ter Beest, M.B., et al. 2005. The role of syntaxins in the specificity of vesicle targeting in polarized epithelial cells. *Mol. Biol. Cell* 16: 5784-5792.
- Sharma, N., et al. 2006. Apical targeting of Syntaxin 3 is essential for epithelial cell polarity. *J. Cell Biol.* 173: 937-948.
- Low, S.H., et al. 2006. Syntaxins 3 and before the establishment of cell polarity. *Mol. Biol. Cell* 17: 977-989.

CHROMOSOMAL LOCATION

Genetic locus: STX3 (human) mapping to 11q12.1; Stx3 (mouse) mapping to 19 A.

SOURCE

Syntaxin 3 (H-33) is a rabbit polyclonal antibody raised against amino acids 1-33 mapping at the N-terminus of Syntaxin 3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Syntaxin 3 (H-33) is recommended for detection of Syntaxin 3 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).

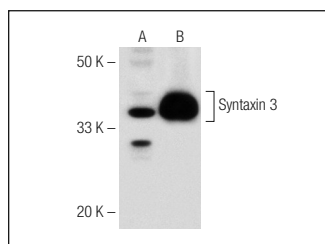
Syntaxin 3 (H-33) is also recommended for detection of Syntaxin 3 in additional species, including bovine and porcine.

Suitable for use as control antibody for Syntaxin 3 siRNA (h): sc-41328, Syntaxin 3 siRNA (m): sc-41329, Syntaxin 3 shRNA Plasmid (h): sc-41328-SH, Syntaxin 3 shRNA Plasmid (m): sc-41329-SH, Syntaxin 3 shRNA (h) Lentiviral Particles: sc-41328-V and Syntaxin 3 shRNA (m) Lentiviral Particles: sc-41329-V.

Molecular Weight of Syntaxin 3: 37 kDa.

Positive Controls: Syntaxin 3 (m): 293T Lysate: sc-123879 or H4 cell lysate: sc-2408.

DATA



Syntaxin 3 (H-33): sc-135259. Western blot analysis of Syntaxin 3 expression in non-transfected: sc-117752 (A) and mouse Syntaxin 3 transfected: sc-123879 (B) 293T whole cell lysates.

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.

PROTOCOLS

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



Try **Syntaxin 3 (D-5): sc-393518**, our highly recommended monoclonal alternative to Syntaxin 3 (H-33).