SANTA CRUZ BIOTECHNOLOGY, INC.

# Syntaxin 3 (m): 293T Lysate: sc-123879

## 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


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.
3. Lowe, S.L., et al. 1997. A SNARE involved in protein transport through the Golgi apparatus. Nature 389: 881-884.
4. Bentz, J. and Mittal, A. 2000. Deployment of membrane fusion protein domains during fusion. Cell Biol. Int. 24: 819-838.
5. 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.
6. 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.
7. Sharma, N., et al. 2006. Apical targeting of Syntaxin 3 is essential for epithelial cell polarity. J. Cell Biol. 173: 937-948.
8. 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 (mouse) mapping to 19 A.

## PRODUCT

Syntaxin 3 (m): 293T Lysate represents a lysate of mouse Syntaxin 3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

Syntaxin 3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Syntaxin 3 antibodies. Recommended use: 10-20 µl per lane.

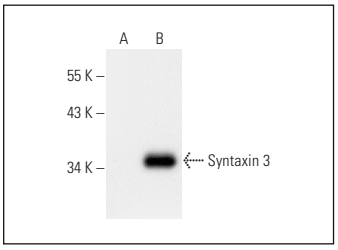
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Syntaxin 3 (D-5): sc-393518 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Syntaxin 3 expression in Syntaxin 3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## 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.

## DATA




Syntaxin 3 (D-5): sc-393518. 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.

## RESEARCH USE

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

## PROTOCOLS

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