

Syntaxin 5 (m): 293T Lysate: sc-123880

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 5 has a short transmembrane domain that directs this protein for *cis*-Golgi localization. Syntaxin 5 associates with p97 to regulate the assembly of transitional ER. Syntaxin 5 also exists in a SNARE complex containing Golgi Snare (GS) 28, GS15, and Ykt6.

REFERENCES

1. Bennett, M.K., Garcia-Ararras, J.E., Elferink, L.A., Peterson, K., Fleming, A.M., Hazuka, C.D. and Scheller, R.H., 1993. The Syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
2. Ravichandran, V. and Roche, P.A. 1997. Cloning and identification of human Syntaxin 5 as a synaptobrevin/VAMP binding protein. *J. Mol. Neurosci.* 8: 159-161.
3. Roy, L., Bergeron, J.J., Lavoie, C., Hendriks, R., Gushue, J., Fazel, A., Pelletier, A., Morre, D.J., Subramaniam, V.N., Hong, W. and Paiement, J. 2000. Role of p97 and Syntaxin 5 in the assembly of transitional endoplasmic reticulum. *Mol. Biol. Cell* 11: 2529-2542.
4. Lavoie, C., Chevet, E., Roy, L., Tonks, N.K., Fazel, A., Posner, B.I., Paiement, J. and Bergeron, J.J. 2000. Tyrosine phosphorylation of p97 regulates transitional endoplasmic reticulum assembly *in vitro*. *Proc. Natl. Acad. Sci. USA* 97: 13637-13642.
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: C215-223.
6. Xu, Y., Martin, S., James, D.E. and Hong, W. 2002. GS15 forms a SNARE complex with Syntaxin 5, GS28, and Ykt6 and is implicated in traffic in the early cisternae of the Golgi apparatus. *Mol. Biol. Cell* 13: 3493-3507.
7. LocusLink Report (LocusID: 6811). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Stx5a (mouse) mapping to 19 A.

PRODUCT

Syntaxin 5 (m): 293T Lysate represents a lysate of mouse Syntaxin 5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

Syntaxin 5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Syntaxin 5 antibodies. Recommended use: 10-20 µl per lane.

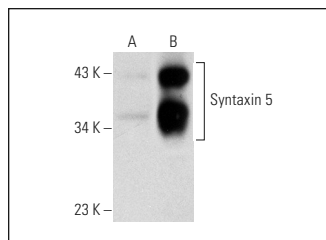
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Syntaxin 5 (B-8): sc-365124 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Syntaxin 5 expression in Syntaxin 5 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 5 (B-8): sc-365124. Western blot analysis of Syntaxin 5 expression in non-transfected: sc-117752 (A) and mouse Syntaxin 5 transfected: sc-123880 (B) 293T whole cell lysates.

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.

PROTOCOLS

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