

Syntaxin 5 (FL-301): sc-25824

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., et al. 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., et al. 2000. Role of p97 and syntaxin 5 in the assembly of transitional endoplasmic reticulum. *Mol. Biol. Cell* 11: 2529-2542.
4. Lavoie, C., et al. 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-C223.
6. Xu, Y., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: STX5 (human) mapping to 11q12.3; Stx5a (mouse) mapping to 19 A.

SOURCE

Syntaxin 5 (FL-301) is a rabbit polyclonal antibody raised against amino acids 1-301 representing full length Syntaxin 5 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.

STORAGE

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

APPLICATIONS

Syntaxin 5 (FL-301) is recommended for detection of Syntaxin 5 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

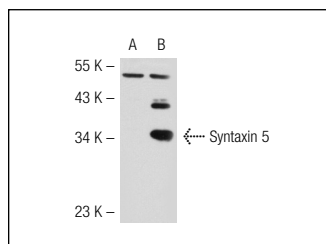
Syntaxin 5 (FL-301) is also recommended for detection of Syntaxin 5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Syntaxin 5 siRNA (h): sc-106586, Syntaxin 5 siRNA (m): sc-153994, Syntaxin 5 shRNA Plasmid (h): sc-106586-SH, Syntaxin 5 shRNA Plasmid (m): sc-153994-SH, Syntaxin 5 shRNA (h) Lentiviral Particles: sc-106586-V and Syntaxin 5 shRNA (m) Lentiviral Particles: sc-153994-V.

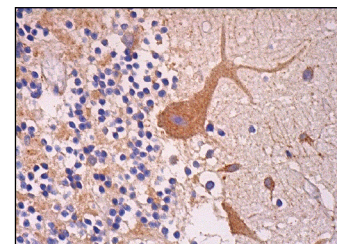
Molecular Weight of Syntaxin 5: 35/42 kDa.

Positive Controls: Syntaxin 5 (m2): 293T Lysate: sc-123881.

DATA



Syntaxin 5 (FL-301): sc-25824. Western blot analysis of Syntaxin 5 expression in non-transfected: sc-117752 (A) and mouse Syntaxin 5 transfected: sc-123881 (B) 293T whole cell lysates.



Syntaxin 5 (FL-301): sc-25824. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells, cells in granular layer and cells in molecular layer.

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.



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Try **Syntaxin 5 (B-8): sc-365124**, our highly recommended monoclonal alternative to Syntaxin 5 (FL-301).