

Syntaxin 7 (N-20): sc-16790

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 7 binds α -SNAP *in vitro* and forms a complex with Syntaxin 8, vti1b and VAMP-8 that functions in the fusion of late endosomes. *In vitro*, the abundant expression of Syntaxin 7 in B16 melanoma cells increases as they undergo melanogenesis. A SNARE complex between Syntaxin 7 and VAMP7 or VAMP8 may regulate the fusion events that eventually lead to melanogenesis.

REFERENCES

1. Elferink, L.A., et al. 1993. A role for synaptotagmin (p65) in regulated exocytosis. *Cell* 72: 153-159.
2. Bennett, M.K., et al. 1993. The syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
3. Yamaguchi, K., et al. 1994. Exocytosis relating proteins in the nervous system. *Neurosci. Res.* 20: 289-292.
4. Hayashi, T., et al. 1994. Synaptic vesicle membrane fusion complex: action of clostridial neurotoxins on assembly. *EMBO J.* 13: 5051-5061.
5. Edelmann, L., et al. 1995. Synaptobrevin binding to synaptophysin: a potential mechanism for controlling the exocytosis fusion machine. *EMBO J.* 14: 224-231.
6. McMahon, H.T., et al. 1995. Synaptic core complex of synaptobrevin, syntaxin, and SNAP25 forms high affinity α -SNAP binding site. *J. Biol. Chem.* 270: 2213-2217.
7. Lin, R.C., et al. 1997. Structural organization of the synaptic exocytosis core complex. *Neuron* 19: 1087-1094.

CHROMOSOMAL LOCATION

Genetic locus: STX7 (human) mapping to 6q23.2; Stx7 (mouse) mapping to 10 A4.

SOURCE

Syntaxin 7 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Syntaxin 7 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-16790 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

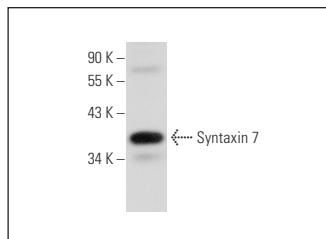
Syntaxin 7 (N-20) is recommended for detection of Syntaxin 7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 7 (N-20) is also recommended for detection of Syntaxin 7 in additional species, including equine, canine, bovine and porcine.

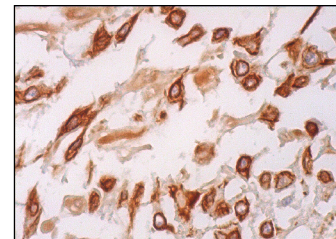
Suitable for use as control antibody for Syntaxin 7 siRNA (h): sc-41334, Syntaxin 7 siRNA (m): sc-41335, Syntaxin 7 shRNA Plasmid (h): sc-41334-SH, Syntaxin 7 shRNA Plasmid (m): sc-41335-SH, Syntaxin 7 shRNA (h) Lentiviral Particles: sc-41334-V and Syntaxin 7 shRNA (m) Lentiviral Particles: sc-41335-V.

Positive Controls: rat brain extract: sc-2392.

DATA



Syntaxin 7 (N-20): sc-16790. Western blot analysis of Syntaxin 7 expression in rat brain tissue extract.



Syntaxin 7 (N-20): sc-16790. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of decidual cells.

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.

MONOS
Satisfaction
Guaranteed

Try **Syntaxin 7 (A-1): sc-514017** or **Syntaxin 7 (G-3): sc-514156**, our highly recommended monoclonal alternatives to Syntaxin 7 (N-20).