

Syntaxin 11 (E-13): sc-109437

BACKGROUND

Syntaxins, a family of proteins involved in the fusion of synaptic vesicles with the plasma membrane, display broad tissue distribution and contain C-terminal hydrophobic domains that direct them to their respective intracellular compartments. Syntaxin 11, also known as STX11, FHL4, HLH4 or HPLH4 is a 287 amino acid protein that contains one t-SNARE coiled-coil homology domain and localizes to the membrane of the *trans*-Golgi network. Interacting with SNAP 23 and VAMP, Syntaxin 11 functions to regulate protein transport between the *trans*-Golgi network and late endosomes. Defects in the gene encoding Syntaxin 11 are the cause of familial hemophagocytic lymphohistiocytosis type 4 (FHL4), a genetically heterogeneous autosomal recessive disorder that is characterized by fever, hepatosplenomegaly, cytopenia, hypertriglyceridemia, hypofibrinogenemia, seizures, cranial nerve deficits and ataxia.

REFERENCES

1. Tang, B.L., et al. 1998. Syntaxin 11: a member of the syntaxin family without a carboxyl-terminal transmembrane domain. *Biochem. Biophys. Res. Commun.* 245: 627-632.
2. Valdez, A.C., et al. 1999. Syntaxin 11 is associated with SNAP-23 on late endosomes and the *trans*-Golgi network. *J. Cell Sci.* 112: 845-854.
3. Zur Stadt, U., et al. 2005. Linkage of familial hemophagocytic lymphohistiocytosis (FHL) type-4 to chromosome 6q24 and identification of mutations in Syntaxin 11. *Hum. Mol. Genet.* 14: 827-834.
4. Yamamoto, K., et al. 2005. Mutations of syntaxin 11 and SNAP23 genes as causes of familial hemophagocytic lymphohistiocytosis were not found in Japanese people. *J. Hum. Genet.* 50: 600-603.
5. Zur Stadt, U., et al. 2006. Mutation spectrum in children with primary hemophagocytic lymphohistiocytosis: molecular and functional analyses of PRF1, UNC13D, STX11, and RAB27A. *Hum. Mutat.* 27: 62-68.
6. Bryceson, Y.T., et al. 2007. Defective cytotoxic lymphocyte degranulation in Syntaxin 11 deficient familial hemophagocytic lymphohistiocytosis 4 (FHL4) patients. *Blood* 110: 1906-1915.
7. Arneson, L.N., et al. 2007. Cutting edge: Syntaxin 11 regulates lymphocyte-mediated secretion and cytotoxicity. *J. Immunol.* 179: 3397-3401.
8. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 605014. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
9. Horne, A., et al. 2008. Characterization of PRF1, STX11 and UNC13D genotype-phenotype correlations in familial hemophagocytic lymphohistiocytosis. *Br. J. Haematol.* 143: 75-83.

CHROMOSOMAL LOCATION

Genetic locus: STX11 (human) mapping to 6q24.2; Stx11 (mouse) mapping to 10 A1.

STORAGE

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

SOURCE

Syntaxin 11 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Syntaxin 11 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109437 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Syntaxin 11 (E-13) is recommended for detection of Syntaxin 11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other Syntaxin family members.

Syntaxin 11 (E-13) is also recommended for detection of Syntaxin 11 in additional species, including canine.

Suitable for use as control antibody for Syntaxin 11 siRNA (h): sc-95389, Syntaxin 11 siRNA (m): sc-153991, Syntaxin 11 shRNA Plasmid (h): sc-95389-SH, Syntaxin 11 shRNA Plasmid (m): sc-153991-SH, Syntaxin 11 shRNA (h) Lentiviral Particles: sc-95389-V and Syntaxin 11 shRNA (m) Lentiviral Particles: sc-153991-V.

Molecular Weight of Syntaxin 11: 35 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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 11 (A-4): sc-377121**, our highly recommended monoclonal alternative to Syntaxin 11 (E-13).