

Synaptotagmin XV (H-107): sc-135412

BACKGROUND

Synaptotagmin XV (SytXV), also known as Synaptotagmin-15 (SYT15) or Chr10Syt, is a 421 amino acid single-pass type III membrane protein that belongs to the synaptotagmin family and contains 2 C2 domains. Both C2 domains are located on the C-terminal of Synaptotagmin XV and neither one mediates calcium-dependent or -independent phospholipid binding. Acting in non-neuronal tissues, Synaptotagmin XV may be involved in the trafficking and exocytosis of secretory vesicles. Synaptotagmin XV exists as four alternatively spliced isoforms that form homodimers. The gene that encodes Synaptotagmin XV contains 15,957 bases and maps to human chromosome 10q11.22. Making up nearly 4.5% of the human genome, chromosome 10 contains over 800 genes and 135 million nucleotides. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, Cockayne syndrome and porphyria.

REFERENCES

- Jabs, E.W., et al. 1994. Jackson-Weiss and Crouzon syndromes are allelic with mutations in fibroblast growth factor receptor 2. *Nat. Genet.* 8: 275-279.
- Craxton, M. 2001. Genomic analysis of synaptotagmin genes. *Genomics* 77: 43-49.
- Südhof, T.C. 2002. Synaptotagmins: why so many? *J. Biol. Chem.* 277: 7629-7632.
- Berger, P., et al. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
- Fukuda, M. 2003. Molecular cloning and characterization of human, rat, and mouse synaptotagmin XV. *Biochem. Biophys. Res. Commun.* 306: 64-71.
- Teresi, R.E., et al. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
- Cho, M.Y., et al. 2008. First report of ovarian dysgerminoma in Cowden syndrome with germline PTEN mutation and PTEN-related 10q loss of tumor heterozygosity. *Am. J. Surg. Pathol.* 32: 1258-1264.
- Laugel, V., et al. 2010. Mutation update for the CSB/ERCC6 and CSA/ERCC8 genes involved in Cockayne syndrome. *Hum. Mutat.* 31: 113-126.

CHROMOSOMAL LOCATION

Genetic locus: SYT15 (human) mapping to 10q11.22; Syt15 (mouse) mapping to 14 B.

SOURCE

Synaptotagmin XV (H-107) is a rabbit polyclonal antibody raised against amino acids 191-297 mapping within an internal region of Synaptotagmin XV of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

Synaptotagmin XV (H-107) is recommended for detection of Synaptotagmin XV of human and, to a lesser extent, mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Synaptotagmin XV (H-107) is also recommended for detection of Synaptotagmin XV in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Synaptotagmin XV siRNA (h): sc-90540, Synaptotagmin XV siRNA (m): sc-153981, Synaptotagmin XV shRNA Plasmid (h): sc-90540-SH, Synaptotagmin XV shRNA Plasmid (m): sc-153981-SH, Synaptotagmin XV shRNA (h) Lentiviral Particles: sc-90540-V and Synaptotagmin XV shRNA (m) Lentiviral Particles: sc-153981-V.

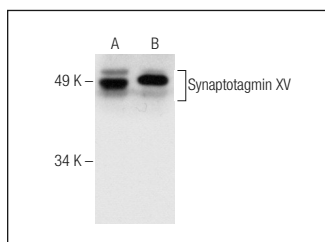
Molecular Weight of Synaptotagmin XV isoforms: 47/44/52/39 kDa.

Positive Controls: Human brain hippocampus extract: sc-364375.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Synaptotagmin XV (H-107): sc-135412. Western blot analysis of Synaptotagmin XV expression in rat brain (A) and human hippocampus (B) tissue extracts.

STORAGE

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