

Slp3 (Q-15): sc-169366

BACKGROUND

Synaptotagmin genes encode a large family of synaptic vesicle type III integral membrane proteins that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. Slp3 (synaptotagmin-like protein 3), also known as SYTL3 or Exophilin-6, is a 610 amino acid intracytoplasmic membrane protein that contains one Rab binding domain and 2 C2 domains. Functioning as a monomer, Slp3 is thought to act as a Rab effector protein that, similar to Synaptotagmins, may play a role in vesicle trafficking. Slp3 binds to target proteins via its N-terminal Rab binding domain and is able to bind phospholipids (via its C-terminal C2 domain) in the presence of calcium. Two isoforms of Slp3 exist due to alternative splicing events.

REFERENCES

- Sutton, R.B., et al. 1995. Structure of the first C2 domain of synaptotagmin I: a novel Ca²⁺/phospholipid-binding fold. *Cell* 80: 929-938.
- Fukuda, M., et al. 2001. Synaptotagmin-like protein 1-3: a novel family of C-terminal-type tandem C2 proteins. *Biochem. Biophys. Res. Commun.* 281: 1226-1233.
- Fukuda, M., et al. 2001. Novel splicing isoforms of synaptotagmin-like proteins 2 and 3: identification of the Slp homology domain. *Biochem. Biophys. Res. Commun.* 283: 513-519.
- Fukuda, M. 2002. The C2A domain of synaptotagmin-like protein 3 (Slp3) is an atypical calcium-dependent phospholipid-binding machine: comparison with the C2A domain of synaptotagmin I. *Biochem. J.* 366: 681-687.
- Fukuda, M. 2003. Slp4- α /granophilin- α inhibits dense-core vesicle exocytosis through interaction with the GDP-bound form of Rab27A in PC12 cells. *J. Biol. Chem.* 278: 15390-15396.
- Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. *Genome Res.* 16: 55-65.
- Gauthier, B.R., et al. 2008. Synaptotagmins bind calcium to release Insulin. *Am. J. Physiol. Endocrinol. Metab.* 295: E1279-E1286.
- Bhalla, A., et al. 2008. Analysis of the synaptotagmin family during reconstituted membrane fusion. Uncovering a class of inhibitory isoforms. *J. Biol. Chem.* 283: 21799-21807.

CHROMOSOMAL LOCATION

Genetic locus: SYTL3 (human) mapping to 6q25.3; Sytl3 (mouse) mapping to 17 A1.

SOURCE

Slp3 (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Slp3 of human origin.

STORAGE

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

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-169366 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Slp3 (Q-15) is recommended for detection of Slp3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Slp2 or Slp5.

Suitable for use as control antibody for Slp3 siRNA (h): sc-95133, Slp3 siRNA (m): sc-153605, Slp3 shRNA Plasmid (h): sc-95133-SH, Slp3 shRNA Plasmid (m): sc-153605-SH, Slp3 shRNA (h) Lentiviral Particles: sc-95133-V and Slp3 shRNA (m) Lentiviral Particles: sc-153605-V.

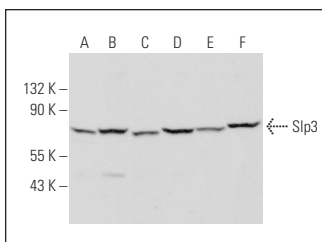
Molecular Weight of Slp3: 69 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, U-251-MG whole cell lysate: sc-364176 or I-11.15 whole cell lysate: sc-364370.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Slp3 (Q-15): sc-169366. Western blot analysis of Slp3 expression in RAW 264.7 (A), U-251-MG (B) and I-11.15 (C) whole cell lysates and mouse spleen (D), mouse liver (E) and mouse brain (F) tissue extracts.

RESEARCH USE

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