SANTA CRUZ BIOTECHNOLOGY, INC.

VAMP-5 (O-25): sc-134145

BACKGROUND

The Syntaxin family of proteins anchor themselves to the cytoplasmic surface of cellular membranes and bind to proteins that are involved in exocytosis, including VAMPs (vesicle-associated membrane proteins), NSF (N-ethyl-maleimide-sensitive factor), SNAP 25 (synaptosomal-associated protein of 25 kDa), SNAPs (soluble NSF attachment proteins) and synaptotagmin. VAMPs are vesicular factors that are important components of the machinery controlling docking and/or fusion of secretory vesicles. VAMPs are thought to function as inhibitors of exocytosis. VAMP-5 (vesicle-associated membrane protein 5) is a 116 amino acid single-pass type IV membrane protein that belongs to the synaptobrevin family. VAMP-5 may participate in trafficking events that are associated with myogenesis, such as myoblast fusion and/or Glut4 trafficking. Containing one v-SNARE coiled-coil homology domain, VAMP-5 localizes to the Golgi apparatus and is encoded by a gene located on human chromosome 2p11.2.

REFERENCES

1. Edelmann, L., et al. 1995. Synaptobrevin binding to synaptophysin: a potential mechanism for controlling the exocytosis fusion machine. EMBO J. 14: 224-231.
2. Zeng, Q., et al. 1998. A novel synaptobrevin/VAMP homologous protein (VAMP-5) is increased during *in vitro* myogenesis and present in the plasma membrane. Mol. Biol. Cell. 9: 2423-2437.
3. Zeng, Q., et al. 2003. The cytoplasmic domain of VAMP-4 and VAMP-5 is responsible for their correct subcellular targeting: the N-terminal extenSion of VAMP-4 contains a dominant autonomous targeting signal for the *trans*-Golgi network. J. Biol. Chem. 278: 23046-23054.
4. Basso, D., et al. 2004. Altered glucose metabolism and proteolysis in pancreatic cancer cell conditioned myoblasts: searching for a gene expression pattern with a microarray analysis of 5,000 skeletal muscle genes. Gut 53: 1159-1166.
5. Brinkman, J.F., et al. 2005. VAMP-5 and VAMP-8 are most likely not involved in primary open-angle glaucoma. Mol. Vis. 11: 582-586.
6. Tran, T.H., et al. 2007. VAMP-4 cycles from the cell surface to the *trans*-Golgi network via sorting and recycling endosomes. J. Cell Sci. 120 (Pt 6): 1028-1041.
7. Elfving, B., et al. 2008. Differential expression of synaptic vesicle proteins after repeated electroconvulsive seizures in rat frontal cortex and hippocampus. Synapse 62: 662-670.

CHROMOSOMAL LOCATION

Genetic locus: VAMP5 (human) mapping to 2p11.2.

SOURCE

VAMP-5 (O-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic VAMP-5 peptide of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

VAMP-5 (O-25) is recommended for detection of VAMP-5 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VAMP-5 siRNA (h): sc-94732, VAMP-5 shRNA Plasmid (h): sc-94732-SH and VAMP-5 shRNA (h) Lentiviral Particles: sc-94732-V.

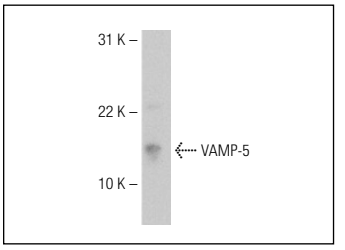
Molecular Weight of VAMP-5: 16 kDa.

Positive Controls: human fetal lung tissue extract.

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).

DATA



VAMP-5 (O-25): sc-134145. Western blot analysis of VAMP-5 expression in human fetal lung tissue extract.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.