SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP47 (A-12): sc-138622

BACKGROUND

In eukaryotic cells, the Golgi apparatus receives newly synthesized proteins from the endoplasmic reticulum and delivers them after covalent modification to their destination in the cell. For membrane-directed proteins, this process is believed to be carried out via vesicular transport. Correct vesicular transport 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. SNAP47 (synaptosomal-associated protein 47), also known as epididymis luminal protein 170, is a 464 amino acid protein that is ubiquitously expressed with highest levels found in nervous tissue. There are four isoforms of SNAP47 that are produced as a result of alternative splicing events.

REFERENCES

1. Holt, M., et al. 2006. Identification of SNAP-47, a novel Qbc-SNARE with ubiquitous expression. J. Biol. Chem. 281: 17076-17083.
2. Leabu, M. 2006. Membrane fusion in cells: molecular machinery and mechanisms. J. Cell. Mol. Med. 10: 423-427.
3. Lang, T., et al. 2008. Core proteins of the secretory machinery. Handb. Exp. Pharmacol. 184: 107-127.
4. Jena, B.P. 2008. Assembly and disassembly of SNAREs in membrane fusion. Methods Cell Biol. 90: 157-182.
5. Stein, A., et al. 2009. Helical extension of the neuronal SNARE complex into the membrane. Nature 460: 525-528.
6. Chen, S., et al. 2009. Engineering botulinum neurotoxin to extend therapeutic intervention. Proc. Natl. Acad. Sci. USA 106: 9180-9184.
7. Jena, B.P. 2009. Membrane fusion: role of SNAREs and calcium. Protein Pept. Lett. 16: 712-717.

CHROMOSOMAL LOCATION

Genetic locus: SNAP47 (human) mapping to 1q42.13; Snap47 (mouse) mapping to 11 B1.3.

SOURCE

SNAP47 (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SNAP47 of human 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-138622 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SNAP47 (A-12) is recommended for detection of SNAP47 of human origin and 1110031B06Rik of mouse origin; SNAP47 isoforms 1-4 of mouse, rat and 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)], 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 SNAP family members.

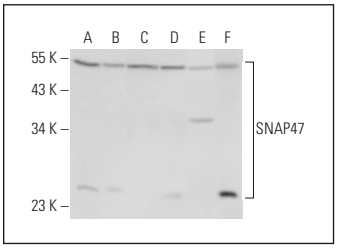
SNAP47 (A-12) is also recommended for detection of SNAP47 and SNAP47 isoforms 1-4 in additional species, including equine.

Suitable for use as control antibody for SNAP47 siRNA (h): sc-88350, SNAP47 siRNA (m): sc-153647, SNAP47 shRNA Plasmid (h): sc-88350-SH, SNAP47 shRNA Plasmid (m): sc-153647-SH, SNAP47 shRNA (h) Lentiviral Particles: sc-88350-V and SNAP47 shRNA (m) Lentiviral Particles: sc-153647-V.

Molecular Weight of SNAP47 isoforms 1/2/3/4: 53/50/23/25 kDa.

Positive Controls: COLO 205 whole cell lysate: sc-364177, KNRK whole cell lysate: sc-2214 or Jurkat whole cell lysate: sc-2204.

DATA



SNAP47 (A-12): sc-138622. Western blot analysis of SNAP47 expression in COLO 205 (**A**), MIA PaCa-2 (**B**), KNRK (**C**), Jurkat (**D**) and Caki-1 (**E**) whole cell lysates and rat pancreas tissue extract (**F**).

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.