SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP47 (D-11): sc-514428

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. and Jahn, R. 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. and Barbieri, J.T. 2009. Engineering botulinum neurotoxin to extend therapeutic intervention. Proc. Natl. Acad. Sci. USA 106: 9180-9184.

CHROMOSOMAL LOCATION

Genetic locus: SNAP47 (human) mapping to 1q42.13.

SOURCE

SNAP47 (D-11) is a mouse monoclonal antibody raised against amino acids 290-442 mapping near the C-terminus of SNAP47 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SNAP47 (D-11) is available conjugated to agarose (sc-514428 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514428 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514428 PE), fluorescein (sc-514428 FITC), Alexa Fluor® 488 (sc-514428 AF488), Alexa Fluor® 546 (sc-514428 AF546), Alexa Fluor® 594 (sc-514428 AF594) or Alexa Fluor® 647 (sc-514428 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514428 AF680) or Alexa Fluor® 790 (sc-514428 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SNAP47 (D-11) is recommended for detection of SNAP47 of human origin by Western Blotting (starting dilution 1:100, 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).

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

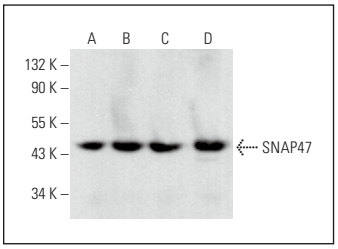
Molecular Weight of SNAP47 isoforms 1-4: 53/50/23/25 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, COLO 205 whole cell lysate: sc-364177 or Caki-1 cell lysate: sc-2224.

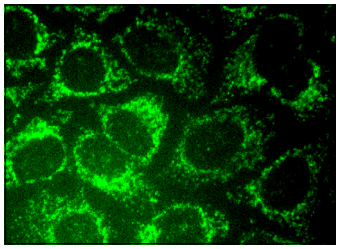
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SNAP47 (D-11): sc-514428. Western blot analysis of SNAP47 expression in Jurkat (**A**), COLO 205 (**B**), MIA PaCa-2 (**C**) and Caki-1 (**D**) whole cell lysates.



SNAP47 (D-11): sc-514428. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Jian, F., et al. 2025. Deacetylated SNAP47 recruits HOPS to facilitate autophagosome-lysosome fusion independent of STX17. Nat. Commun. 16: 543.

STORAGE

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

RESEARCH USE

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