SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP 23 (A-5): sc-166244

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. A SNAP 25 related t-SNARE protein, SNAP 23, is required for exocytosis, suggesting that SNAP 23 may play an important role in membrane fusion events. The human SNAP 23 gene encodes two SNAP 23 isoforms, SNAP 23A and SNAP 23B. SNAP 23B is identical to a fragment of SNAP 23A, but SNAP 23B lacks 53 amino acid residues (90 to 142) that are present in SNAP 23A. SNAP 23 is ubiquitously expressed and is an important regulator of transport vesicle docking and fusion in all mammalian cells.

CHROMOSOMAL LOCATION

Genetic locus: SNAP23 (human) mapping to 15q15.1; Snap23 (mouse) mapping to 2 E5.

SOURCE

SNAP 23 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 117-145 near the C-terminus of SNAP 23 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.

Blocking peptide available for competition studies, sc-166244 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SNAP 23 (A-5) is recommended for detection of SNAP 23 of mouse, rat and 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 SNAP 23 siRNA (h): sc-41308, SNAP 23 siRNA (m): sc-41309, SNAP 23 siRNA (r): sc-72219, SNAP 23 shRNA Plasmid (h): sc-41308-SH, SNAP 23 shRNA Plasmid (m): sc-41309-SH, SNAP 23 shRNA Plasmid (r): sc-72219-SH, SNAP 23 shRNA (h) Lentiviral Particles: sc-41308-V, SNAP 23 shRNA (m) Lentiviral Particles: sc-41309-V and SNAP 23 shRNA (r) Lentiviral Particles: sc-72219-V.

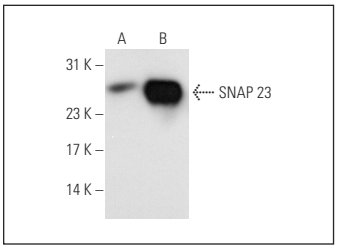
Molecular Weight (predicted) of SNAP 23: 23 kDa.

Molecular Weight (observed) of SNAP 23: 26 kDa.

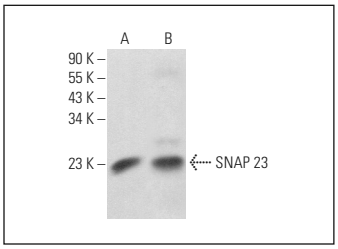
STORAGE

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

DATA



SNAP 23 (A-5): sc-166244. Western blot analysis of SNAP 23 expression in non-transfected: sc-110760 (**A**) and human SNAP 23 transfected: sc-110562 (**B**) 293 whole cell lysates.



SNAP 23 (A-5): sc-166244. Western blot analysis of SNAP 23 expression in HeLa (**A**) and U-937 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Peschke, K., et al. 2014. IκB kinase 2 is essential for IgE-induced mast cell *de novo* cytokine production but not for degranulation. Cell Rep. 8: 1300-1307.
2. Brasher, M.I., et al. 2017. Interaction of Munc18c and Syntaxin4 facilitates invadopodium formation and extracellular matrix invasion of tumour cells. J. Biol. Chem. 292: 16199-16210.
3. Wang, S., et al. 2019. Proteomic analysis of urinary extracellular vesicles reveal biomarkers for neurologic disease. EBioMedicine 45: 351-361.
4. Pietrobon, C.B., et al. 2020. Early weaning induces short- and long-term effects on pancreatic islets in wistar rats of both sexes. J. Physiol. 598: 489-502.
5. Osawa, Y., et al. 2021. EXOC1 plays an integral role in spermatogonia pseudopod elongation and spermatocyte stable syncytium formation in mice. Elife 10: e59759.
6. Park, J.S., et al. 2022. LDHB deficiency promotes mitochondrial dysfunction mediated oxidative stress and neurodegeneration in adult mouse brain. Antioxidants 11: 261.
7. Xie, Y.X., et al. 2022. Lysosomal exocytosis releases pathogenic α-synuclein species from neurons in synucleinopathy models. Nat. Commun. 13: 4918.
8. Li, L., et al. 2022. Ferroportin-dependent ferroptosis induced by ellagic acid retards liver fibrosis by impairing the SNARE complexes formation. Redox Biol. 56: 102435.
9. Farquhar, R.E., et al. 2022. Role of SNARE proteins in the insertion of KCa3.1 in the plasma membrane of a polarized epithelium. Front. Physiol. 13: 905834.

RESEARCH USE

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