

SNAP 23 (G-16): sc-22644

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.

REFERENCES

1. Ravichandran, V., Chawla, A. and Roche, P.A. 1996. Identification of a novel syntaxin- and synaptobrevin/VAMP-binding protein, SNAP 23, expressed in non-neuronal tissues. *J. Biol. Chem.* 271: 13300-13333.
2. Nagahama, M., Orci, L., Ravazzola, M., Amherdt, M., Lacomis, L., Tempst, P., Rothman, J.E. and Sollner, T.H. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.
3. Lowe, S.L., Peter, F., Subramaniam, V.N., Wong, S.H. and Hong, W. 1997. A SNARE involved in protein transport through the Golgi apparatus. *Nature* 389: 881-884.
4. Mollinedo, F. and Lazo, P.A. 1997. Identification of two isoforms of the vesicle-membrane fusion protein SNAP 23 in human neutrophils and HL-60 cells. *Biochem. Biophys. Res. Commun.* 231: 808-812.

CHROMOSOMAL LOCATION

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

SOURCE

SNAP 23 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SNAP-23 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-22644 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SNAP 23 (G-16) is recommended for detection of SNAP-23 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).

SNAP 23 (G-16) is also recommended for detection of SNAP-23 in additional species, including canine, bovine and porcine.

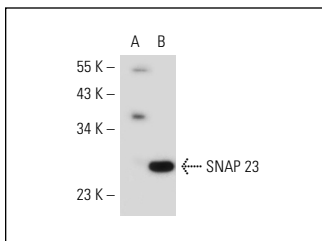
Suitable for use as control antibody for SNAP 23 siRNA (h): sc-41308, SNAP 23 siRNA (m): sc-41309, SNAP 23 shRNA Plasmid (h): sc-41308-SH, SNAP 23 shRNA Plasmid (m): sc-41309-SH, SNAP 23 shRNA (h) Lentiviral Particles: sc-41308-V and SNAP 23 shRNA (m) Lentiviral Particles: sc-41309-V.

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

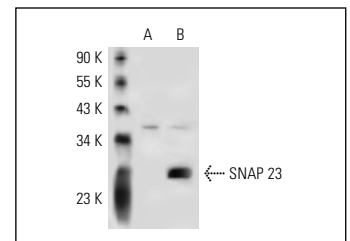
Molecular Weight (observed) of SNAP 23: 26 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or SNAP 23 (h): 293 Lysate: sc-110562.

DATA



SNAP 23 (G-16): sc-22644. 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 (G-16): sc-22644. Western blot analysis of SNAP 23 expression in non-transfected: sc-110760 (A) and human SNAP 23 transfected: sc-110882 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee, J.S., Cho, W.J., Jeftinija, K., Jeftinija, S. and Jena, B.P. 2009. Porosome in astrocytes. *J. Cell. Mol. Med.* 13: 365-372.
2. Hou, X., Lewis, K.T., Wu, Q., Wang, S., Chen, X., Flack, A., Mao, G., Taatjes, D.J., Sun, F. and Jena, B.P. 2014. Proteome of the porosome complex in human airway epithelia: interaction with the cystic fibrosis transmembrane conductance regulator (CFTR). *J. Proteomics* 96: 82-91.

RESEARCH USE

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

MONOS
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Try **SNAP 23 (D-11): sc-374215** or **SNAP 23 (E-5): sc-374060**, our highly recommended monoclonal alternatives to SNAP 23 (G-16).