SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP 23 (F-1): sc-373743

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, which maps to chromosome 15q15.1, encodes two SNAP 23 isoforms, SNAP 23A and SNAP 23B. SNAP 23B is identical to SNAP 23A, but lacks 53 amino acid residues, from 90 to 142. SNAP 23 is ubiquitously expressed and is an important regulator of transport vesicle docking and fusion in all mammalian cells.

REFERENCES

1. Nagahama, M., et al. 1996. A v-SNARE implicated in intra-Golgi transport. J. Cell Biol. 133: 507-516.
2. Ravichandran, V., et al. 1996. Identification of a novel Syntaxin- and synaptobrevin/VAMP-binding protein, SNAP 23, expressed in non-neuronal tissues. J. Biol. Chem. 271: 13300-13333.
3. Lowe, S.L., et al. 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 (F-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 93-124 within an internal region 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-373743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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 (F-1) 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), immunohistochemistry (including paraffin-embedded sections) (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.

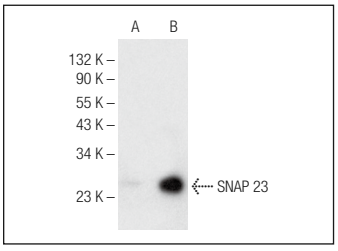
Molecular Weight (observed) of SNAP 23: 26 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or SNAP 23 (h2): 293 Lysate: sc-110882.

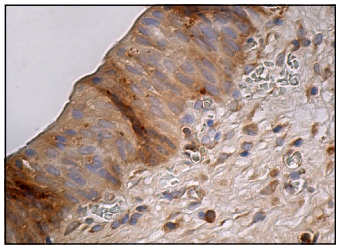
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SNAP 23 (F-1): sc-373743. 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.



SNAP 23 (F-1): sc-373743. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells.

RESEARCH USE

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