

# SNAP 23 (E-5): sc-374060

## 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., 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.
2. Nagahama, M., et al. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.
3. Lowe, S.L., et al. 1997. A SNARE involved in protein transport through the Golgi apparatus. *Nature* 389: 881-884.
4. Mollinedo, F., et al. 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.
5. Guo, Z., et al. 1998. Relocation of the t-SNARE SNAP 23 from lamellipodia-like cell surface projections regulates compound exocytosis in mast cells. *Cell* 94: 537-548.
6. Bentz, J., et al. 2000. Deployment of membrane fusion protein domains during fusion. *Cell Biol. Int.* 24: 819-838.
7. LocusLink Report (LocusID: 8773). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: SNAP23 (human) mapping to 15q15.1.

## SOURCE

SNAP 23 (E-5) is a mouse monoclonal antibody raised against amino acids 86-135 mapping within an internal region of SNAP 23 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SNAP 23 (E-5) is recommended for detection of SNAP 23A 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 SNAP 23 siRNA (h): sc-41308, SNAP 23 shRNA Plasmid (h): sc-41308-SH and SNAP 23 shRNA (h) Lentiviral Particles: sc-41308-V.

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

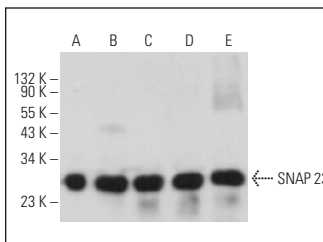
Molecular Weight (observed) of SNAP 23: 26 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, JAR cell lysate: sc-2276 or K-562 whole cell lysate: sc-2203.

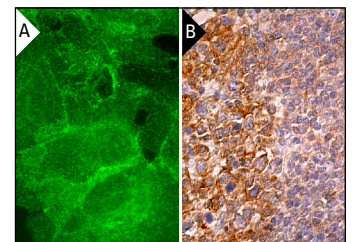
## RECOMMENDED SUPPORT REAGENTS

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



SNAP 23 (E-5): sc-374060. Western blot analysis of SNAP 23 expression in HeLa (A), JAR (B), HEL 92.1.7 (C), K-562 (D) and HL-60 (E) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



SNAP 23 (E-5): sc-374060. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in germinal and non-germinal centers (B).

## 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.