SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP 23 (D-11): sc-374215

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.

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.

CHROMOSOMAL LOCATION

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

SOURCE

SNAP 23 (D-11) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SNAP 23 (D-11) is available conjugated to agarose (sc-374215 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374215 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374215 PE), fluorescein (sc-374215 FITC), Alexa Fluor® 488 (sc-374215 AF488), Alexa Fluor® 546 (sc-374215 AF546), Alexa Fluor® 594 (sc-374215 AF594) or Alexa Fluor® 647 (sc-374215 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374215 AF680) or Alexa Fluor® 790 (sc-374215 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 (D-11) 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), 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).

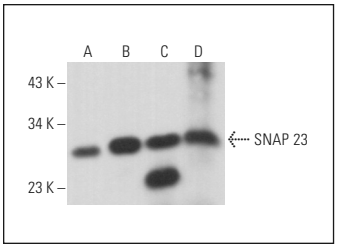
Suitable for use as control antibody for SNAP 23 siRNA (h): sc-41308, SNAP 23 shRNA Plasmid (h): sc-41308-SH and SNAP 23 shRNA (h) Lentiviral Particles: sc-41308-V.

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

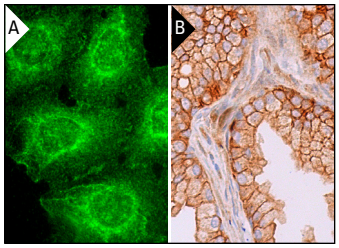
Molecular Weight (observed) of SNAP 23: 26 kDa.

Positive Controls: JAR cell lysate: sc-2276, HEL 92.1.7 cell lysate: sc-2270 or U-937 cell lysate: sc-2239.

DATA



SNAP 23 (D-11): sc-374215. Western blot analysis of SNAP 23 expression in JAR (**A**), HEL 92.1.7 (**B**) and U-937 (**C**) whole cell lysates and human placenta tissue extract (**D**).



SNAP 23 (D-11): sc-374215. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Ali, T., et al. 2018. Natural dietary supplementation of anthocyanins via PI3K/Akt/Nrf2/HO-1 pathways mitigate oxidative stress, neurodegeneration, and memory impairment in a mouse model of Alzheimer's disease. Mol. Neurobiol. 55: 6076-6093.
2. Ikram, M., et al. 2019. Hesperetin confers neuroprotection by regulating Nrf2/TLR4/NFκB signaling in an Aβ mouse model. Mol. Neurobiol. 56: 6293-6309.
3. Ali, W., et al. 2020. Oral administration of α linoleic acid rescues Aβ-induced glia-mediated neuroinflammation and cognitive dysfunction in C57BL/6N mice. Cells 9: 667.
4. Ikram, M., et al. 2021. Oral administration of gintonin protects the brains of mice against Aβ-induced Alzheimer disease pathology: antioxidant and anti-inflammatory effects. Oxid. Med. Cell. Longev. 2021: 6635552.

RESEARCH USE

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