SANTA CRUZ BIOTECHNOLOGY, INC.

SNX2 (13): sc-136072

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sorting nexin 1 (SNX1) is a member of a large family of hydrophilic proteins that interact with a variety of receptor types and are involved in intracellular trafficking. SNX1 and the related splice variant, SNX1A, bind the epidermal growth factor (EGF) receptor, facilitate its transport to lysosome, and thereby contribute to the degradation of the receptor. SNX2 and SNX4 share a high degree of amino acid similarity with SNX1, as they all contain a characteristic phox homology (PX) domain. These proteins are all partially associated with cellular membranes and they, likewise, associate with EGF, PDGF and Insulin receptor tyrosine kinases. These nexins are widely expressed and yet have various tissue distribution patterns. Additionally, the sorting nexins can associate with each other and with a variety of other cellular proteins, suggesting that they exist as part of multisubunit complexes. The related protein, SNX3, comprises a distinct subgroup of nexins that share less sequence similarity outside of the PX domain and have dramatically different binding affinities for the tyrosine kinase receptors.

REFERENCES

1. Trowbridge, I.S., et al. 1993. Signal-dependent membrane protein trafficking in the endocytic pathway. Annu. Rev. Cell Biol. 9: 129-161.
2. Opresko, L.K., et al. 1995. Endocytosis and lysosomal targeting of epidermal growth factor receptors are mediated by distinct sequences independent of the tyrosine kinase domain. J. Biol. Chem. 270: 4325-4333.
3. Ponting, C.P. 1996. Novel domains in NADPH oxidase subunits, sorting nexins, and PtdIns 3-kinases: binding partners of SH3 domains? Protein Sci. 5: 2353-2357.
4. Kurten, R.C., et al. 1996. Enhanced degradation of EGF receptors by a sorting nexin, SNX1. Science 272: 1008-1010.
5. Horazdovsky, B.F., et al. 1997. A sorting nexin-1 homologue, Vps5p, forms a complex with Vps17p and is required for recycling the vacuolar protein-sorting receptor. Mol. Biol. Cell 8: 1529-1541.
6. Haft, C.R., et al. 1998. Identification of a family of sorting nexin molecules and characterization of their association with receptors. Mol. Cell. Biol. 18: 7278-7287.

CHROMOSOMAL LOCATION

Genetic locus: SNX2 (human) mapping to 5q23.2; Snx2 (mouse) mapping to 18 D1.

SOURCE

SNX2 (13) is a mouse monoclonal antibody raised against amino acids 15-137 of SNX2 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 20% glycerol and 0.04% stabilizer protein.

RESEARCH USE

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

APPLICATIONS

SNX2 (13) is recommended for detection of SNX2 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

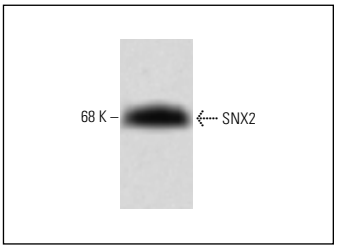
SNX2 (13) is also recommended for detection of SNX2 in additional species, including canine.

Suitable for use as control antibody for SNX2 siRNA (h): sc-41349, SNX2 siRNA (m): sc-41350, SNX2 shRNA Plasmid (h): sc-41349-SH, SNX2 shRNA Plasmid (m): sc-41350-SH, SNX2 shRNA (h) Lentiviral Particles: sc-41349-V and SNX2 shRNA (m) Lentiviral Particles: sc-41350-V.

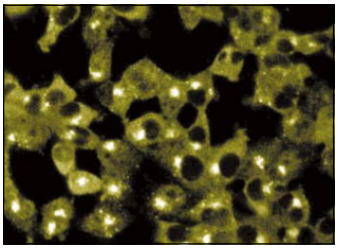
Molecular Weight of SNX2: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human endothelial whole cell lysate.

DATA



SNX2 (13): sc-136072. Western blot analysis of SNX2 expression in human endothelial whole cell lysate.



SNX2 (13): sc-136072. Immunofluorescence staining of ES-2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Itai, N., et al. 2018. The phosphorylation of sorting nexin 5 at serine 226 regulates retrograde transport and macropinocytosis. PLoS ONE 13: e0207205.
2. Han, J., et al. 2020. Involvement of CASP9 (caspase 9) in IGF2R/CI-MPR endosomal transport. Autophagy 17: 1393-1409.
3. Markworth, R., et al. 2021. Tubular microdomains of Rab7-positive endosomes retrieve TrkA, a mechanism disrupted in Charcot-Marie-Tooth disease 2B. J. Cell Sci. 134: jcs258559.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.