SANTA CRUZ BIOTECHNOLOGY, INC.

SNX18 (E-16): sc-165518



BACKGROUND

Sorting nexin (SNX) proteins are members of a large family of hydrophilic PX (phospholipid-binding motif) domain-containing proteins that interact with a variety of receptor types. SNXs are widely expressed, although the tissue distribution of each SNX mRNA varies. The ability of SNXs to bind specific phospholipids, as well as their tendency to form protein-protein complexes, suggests a role for these proteins in cellular membrane trafficking and protein sorting. SNXs may also function specifically in pro-degradative sorting, internalization, endosomal recycling or simply in endosomal sorting. SNXs partially associate with cellular membranes, despite their hydrophilic nature. SNX18, also known as sorting nexin-associated Golgi protein 1 (SNAG1), is a 628 amino acid member of the SNX family that is involved in several stages of intracellular trafficking. Localized to the intracytoplasmic membrane, SNX18 contains a phox homology domain and a SH2 domain. Two isoforms of SNX18 exist as a result of alternative splicing events.

REFERENCES

- 1. Kurten, R.C., Cadena, D.L., and Gill, G.N. 1996. Enhanced degradation of EGF receptors by a sorting nexin, SNX1. Science 272: 1008-1010.
- Haft, C.R., de la Luz Sierra, M., Barr, V.A., Haft, D.H., and Taylor, S.I. 1998. Identification of a family of sorting nexin molecules and characterization of their association with receptors. Mol. Cell. Biol. 18: 7278-7287.
- 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.
- Worby, C.A., and Dixon, J.E. 2002. Sorting out the cellular functions of sorting nexins. Nature reviews. Mol. Cell. Biol. 3: 919-931.
- MaCaulay, S.L., Stoichevska, V., Grusovin, J., Gough, K.H., Castelli, L.A. and Ward, C.W. 2003. Insulin stimulates movement of sorting nexin 9 between cellular compartments: a putative role mediating cell surface receptor expression and insulin action. Biochem. J. 376: 123-134.
- Koga, T., Onishi, M., Nakamura, Y., Hirata, A., Nakamura, T., Shimoda, C., Iwaki, T., Takegawa, K. and Fukui, Y. 2004. Sorting nexin homologues are targets of phosphatidylinositol 3-phosphate in sporulation of *Schizosaccharomyces pombe*. Genes Cells 9: 561-574.
- Choi, J.H., Hong, W.P., Kim, M.J., Kim, J.H., Ryu, S.H. and Suh, P.G. 2004. Sorting nexin 16 regulates EGF receptor trafficking by phosphatidylinositol-3-phosphate interaction with the Phox domain. J. Cell Sci. 117: 4209-4218.
- Carlton, J., Bujny, M., Rutherford, A. and Cullen, P. 2005. Sorting nexins unifying trends and new perspectives. Traffic 6: 75-82.
- 9. Seet, L.F. and Hong, W. 2006. The Phox (PX) domain proteins and membrane traffic. Biochim. Biophys. Acta 1761: 878-896.

CHROMOSOMAL LOCATION

Genetic locus: SNX18 (human) mapping to 5q11.2; Snx18 (mouse) mapping to 13 D2.2.

RESEARCH USE

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

SOURCE

SNX18 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SNX18 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-165518 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SNX18 (E-16) is recommended for detection of SNX18 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other SNX family members.

Suitable for use as control antibody for SNX18 siRNA (h): sc-91682, SNX18 siRNA (m): sc-153667, SNX18 shRNA Plasmid (h): sc-91682-SH, SNX18 shRNA Plasmid (m): sc-153667-SH, SNX18 shRNA (h) Lentiviral Particles: sc-91682-V and SNX18 shRNA (m) Lentiviral Particles: sc-153667-V.

Molecular Weight of SNX18: 69 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.

MONOS T Satisfation n Guaranteed

Try **SNX18 (F-10): sc-515461**, our highly recommended monoclonal alternative to SNX18 (E-16).