SANTA CRUZ BIOTECHNOLOGY, INC.

SNX16 (N-20): sc-49124

BACKGROUND

Sorting nexin proteins (SNX) are members of a large family of hydrophilic proteins that interact with a variety of receptor types, contain a characteristic phox homology (PX) domain and play a role in intracellular trafficking. Viral infection by a nucleocapsid is initiated when it is transported to late endosomes and, ultimately, to the cytoplasm. This process depends on the late endosomal lipid lysobisphosphatidic acid (LBPA) and its putative effector Alix/AIP1, and is regulated by PtdIns3P (phosphatidylinositol-3-phosphate) signaling via SNX16, its binding protein. Overexpression of SNX16 increases the rate of EGF-induced EGFR degradation and prevents EGF-induced upmodulation of ERK and serum response element (SRE). Mutation in the PX domain eradicates the inhibitory effect of SNX16 on EGF-induced activation of ERK and SRE, suggesting that SNX16 directs the sorting of EGFR to the endosomal compartment, thus regulating EGF-induced cell signaling.

REFERENCES

1. Hanson, B.J. and Hong, W. 2003. Evidence for a role of SNX16 in regulating traffic between the early and later endosomal compartments. J. Biol. Chem. 278: 34617-34630.
2. 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.
3. Watahiki, A., Waki, K., Hayatsu, N., Shiraki, T., Kondo, S., Nakamura, M., Sasaki, D., Arakawa, T., Kawai, J., Harbers, M., Hayashizaki, Y. and Carninci, P. 2004. Libraries enriched for alternatively spliced exons reveal splicing patterns in melanocytes and melanomas. Nat. Methods 1: 233-239.
4. Le Blanc, I., Luyet, P.P., Pons, V., Ferguson, C., Emans, N., Petiot, A., Mayran, N., Demaurex, N., Faure, J., Sadoul, R., Parton, R.G. and Gruenberg, J. 2005. Endosome-to-cytosol transport of viral nucleocapsids. Nat. Cell Biol. 7: 653-664.

CHROMOSOMAL LOCATION

Genetic locus: SNX16 (human) mapping to 8q21.13; Snx16 (mouse) mapping to 3 A1.

SOURCE

SNX16 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SNX16 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-49124 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SNX16 is recommended for detection of SNX16 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)], 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).

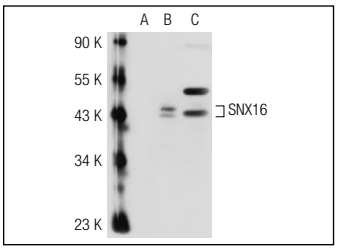
SNX16 (N-20) is also recommended for detection of SNX16 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SNX16 siRNA (h): sc-61585, SNX16 siRNA (m): sc-61586, SNX16 shRNA Plasmid (h): sc-61585-SH, SNX16 shRNA Plasmid (m): sc-61586-SH, SNX16 shRNA (h) Lentiviral Particles: sc-61585-V and SNX16 shRNA (m) Lentiviral Particles: sc-61586-V.

Molecular Weight of SNX16: 39 kDa.

Positive Controls: SNX16 (m): 293T Lysate: sc-123693, mouse heart extract: sc-2254 or HeLa whole cell lysate: sc-2200.

DATA



SNX16 (N-20): sc-49124. Western blot analysis of SNX16 expression in non-transfected: sc-117752 (**A**) and mouse SNX16 transfected: sc-123693 (**B**) 293T whole cell lysates and mouse heart tissue extract (**C**).

RESEARCH USE

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

PROTOCOLS

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