

SNX9 (h): 293T Lysate: sc-174095

BACKGROUND

Sorting nexin proteins (SNX) 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. SNX9 resides in the cytosol where it influences the processing and trafficking of Insulin receptors. The enzyme aldolase binds to and inactivates SNX9. Phosphorylation of SNX9 releases aldolase and frees SNX9 to recruit and activate Dynamin II, a neuronal phosphoprotein and a GTPase enzyme which mediates late stages of endocytosis in both neural and non-neural cells.

REFERENCES

1. McClure, S.J. and Robinson, P.J. 1997. Dynamin, endocytosis and intracellular signalling (review). *Mol. Membr. Biol.* 13: 189-215.
2. Worby, C.A. and Dixon, J.E. 2002. Sorting out the cellular functions of sorting nexins. *Nat. Rev. Mol. Cell Biol.* 3: 919-931.
3. MaCaulay, S.L., et al. 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.
4. Lundmark, R. and Carlsson, S.R. 2004. Regulated membrane recruitment of Dynamin II mediated by sorting nexin 9. *J. Biol. Chem.* 279: 42694-42702.
5. Carlton, J., et al. 2005. Sorting nexins—unifying trends and new perspectives. *Traffic* 6: 75-82.
6. Jacques, C., et al. 2005. Two-step differential expression analysis reveals a new set of genes involved in thyroid oncocytic tumors. *J. Clin. Endocrinol. Metab.* 90: 2314-2320.
7. Soulet, F., et al. 2005. SNX9 regulates Dynamin assembly and is required for efficient clathrin-mediated endocytosis. *Mol. Biol. Cell.* 16: 2058-2067.
8. Yeow-Fong, L., et al. 2005. SNX9 as an adaptor for linking Synaptojanin 1 to the Cdc42 effector ACK1. *FEBS Lett.* 579: 5040-5048.

CHROMOSOMAL LOCATION

Genetic locus: SNX9 (human) mapping to 6q25.3.

PRODUCT

SNX9 (h): 293T Lysate represents a lysate of human SNX9 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

SNX9 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SNX9 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.