SANTA CRUZ BIOTECHNOLOGY, INC.

SNX15 siRNA (h): sc-61583

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 are involved in intracellular trafficking. SNX15 encodes a deduced 342 amino acid protein, as well as a 256 amino acid splice variant known as SNX15A. Highest expression of SNX15 is observed in skeletal muscle, heart, brain, kidney, spleen, thymus and small intestine tissues. Endogenous and overexpressed SNX15 localize on membranes and in the cytosol. SNX15 associates with itself as well as with SNX1, SNX2, SNX4 and platelet-derived growth factor receptor (PDGFR). Overexpression of SNX15 leads to a decrease in the processing of Insulin and hepatocyte growth factor receptors to their mature subunits, and also results in the mislocalization of Furin, the endoprotease accountable for cleavage of Insulin and hepatocyte growth factor receptors.

REFERENCES

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2. Barr, V.A., Phillips, S.A., Taylor, S.I. and Haft, C.R. 2000. Overexpression of a novel sorting nexin, SNX15, affects endosome morphology and protein trafficking. Traffic 1: 904-916.
3. Phillips, S.A., Barr, V.A., Haft, D.H., Taylor, S.I. and Haft, C.R. 2001. Identification and characterization of SNX15, a novel sorting nexin involved in protein trafficking. J. Biol. Chem. 276: 5074-5084.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605964. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Takasu, H., Jee, J.G., Ohno, A., Goda, N., Fujiwara, K., Tochio, H., Shirakawa, M. and Hiroaki, H. 2005. Structural characterization of the MIT domain from human Vps4b. Biochem. Biophys. Res. Commun. 334: 460-465.

CHROMOSOMAL LOCATION

Genetic locus: SNX15 (human) mapping to 11q13.1.

PRODUCT

SNX15 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SNX15 shRNA Plasmid (h): sc-61583-SH and SNX15 shRNA (h) Lentiviral Particles: sc-61583-V as alternate gene silencing products.

For independent verification of SNX15 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61583A, sc-61583B and sc-61583C.

RESEARCH USE

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SNX15 siRNA (h) is recommended for the inhibition of SNX15 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

SNX15 (B-8): sc-393430 is recommended as a control antibody for monitoring of SNX15 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SNX15 gene expression knockdown using RT-PCR Primer: SNX15 (h)-PR: sc-61583-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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