Sel-1L3 siRNA (m): sc-108703



The Power to Question

BACKGROUND

Sel-1L3 (sel-1 suppressor of lin-12-like 3) is a 1,132 amino acid single-pass membrane protein that contains eight Sel1-like repeats. Existing as three alternatively spliced isoforms, the Sel-1L3 gene is conserved in chimpanzee, canine, mouse, rat, chicken and zebrafish, and maps to human chromosome 4p15-2. Several independent linkage studies have identified chromosome 4p15-p16 as a putative region of susceptibility for bipolar disorder, schizophrenia and related phenotypes. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is on chromosome 4. FGFR-3 is also encoded on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

- Hillier, L.W., Graves, T.A., Fulton, R.S., Fulton, L.A., Pepin, K.H., Minx, P., Wagner-McPherson, C., Layman, D., Wylie, K., Sekhon, M., Becker, M.C., Fewell, G.A., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
- 2. Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75: 25-71.
- 3. Versteegh, F.G., Buma, S.A., Costin, G., de Jong, W.C. and Hennekam, R.C. 2007. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. Am. J. Med. Genet. A. 143A: 2113-2121.
- Doherty, E.S., Lacbawan, F., Hadley, D.W., Brewer, C., Zalewski, C., Kim, H.J., Solomon, B., Rosenbaum, K., Domingo, D.L., Hart, T.C., Brooks, B.P., Immken, L., Lowry, R.B., Kimonis, V., Shanske, A.L., Jehee, F.S., et al. 2007. Muenke syndrome (FGFR-3-related craniosynostosis): Expansion of the phenotype and review of the literature. Am. J. Med. Genet. A 143A: 3204-3215.
- 5. de Frutos, C.A., Vega, S., Manzanares, M., Flores, J.M., Huertas, H., Martínez-Frías, M.L. and Nieto, M.A. 2007. Snail1 Is a transcriptional effector of FGFR-3 signaling during chondrogenesis and achondroplasias. Dev. Cell 13: 872-883.
- Stack, E.C., Dedeoglu, A., Smith, K.M., Cormier, K., Kubilus, J.K., Bogdanov, M., Matson, W.R., Yang, L., Jenkins, B.G., Luthi-Carter, R., Kowall, N.W., Hersch, S.M., Beal, M.F. and Ferrante, R.J. 2007. Neuroprotective effects of synaptic modulation in Huntington's disease R6/2 mice. J. Neurosci. 27: 12908-12915.
- Christoforou, A., Le Hellard, S., Thomson, P.A., Morris, S.W., Tenesa, A., Pickard, B.S., Wray, N.R., Muir, W.J., Blackwood, D.H., Porteous, D.J. and Evans, K.L. 2007. Association analysis of the chromosome 4p15-p16 candidate region for bipolar disorder and schizophrenia. Mol. Psychiatry 12: 1011-1025.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Sel1I3 (mouse) mapping to 5 C1.

PRODUCT

Sel-1L3 siRNA (m) is a target-specific 19-25 nt siRNA 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 Sel-1L3 shRNA Plasmid (m): sc-108703-SH and Sel-1L3 shRNA (m) Lentiviral Particles: sc-108703-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

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

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

APPLICATIONS

Sel-1L3 siRNA (m) is recommended for the inhibition of Sel-1L3 expression in mouse 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Sel-1L3 gene expression knockdown using RT-PCR Primer: Sel-1L3 (m)-PR: sc-108703-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

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