

SUSD2 siRNA (m): sc-153937

BACKGROUND

The sushi domain, which is comprised of approximately 60 amino acids and four cysteines, is present in a variety of proteins where it facilitates protein-protein interactions throughout the cell. SUSD2 (sushi domain containing 2), also known as BK65A6.2 or FLJ22778, is a 822 amino acid single-pass type I membrane protein containing one AMOP domain, one SMB (somatomedin-B) domain, one sushi (CCP/SCR) domain and one VWFD domain. The gene encoding SUSD2 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Dunham, I., Shimizu, N., Roe, B.A., Chisoe, S., Hunt, A.R., Collins, J.E., Bruskiewich, R., Beare, D.M., Clamp, M., Smink, L.J., Ainscough, R., Almeida, J.P., Babbage, A., Bagguley, C., Bailey, J., Barlow, K., et al. 1999. The DNA sequence of human chromosome 22. *Nature* 402: 489-495.
2. Wei Xq, M., Gracie, J.A., Leung, B.P., Gao Bm, H., Niedbala, W., Paterson, G.K., McInnes, I.B. and Liew, F.Y. 2001. The Sushi domain of soluble IL-15 receptor α is essential for binding IL-15 and inhibiting inflammatory and allogenic responses *in vitro* and *in vivo*. *J. Immunol.* 167: 277-282.
3. Briegel, W. and Cohen, M. 2004. Chromosome 22q11 deletion syndrome and its relevance for child and adolescent psychiatry. An overview of etiology, physical symptoms, aspects of child development and psychiatric disorders. *Z. Kinder Jugendpsychiatr. Psychother.* 32: 107-115.
4. Gothelf, D., Schaer, M. and Eliez, S. 2008. Genes, brain development and psychiatric phenotypes in velo-cardio-facial syndrome. *Dev. Disabil. Res. Rev.* 14: 59-68.
5. Sathyamoorthi, S., Morales, J., Bermudez, J., McBride, L., Luquette, M., McGoey, R., Oates, N., Hales, S., Biegel, J.A. and Lacassie, Y. 2009. Array analysis and molecular studies of INI1 in an infant with deletion 22q13 (Phelan-McDermid syndrome) and atypical teratoid/rhabdoid tumor. *Am. J. Med. Genet. A* 149A: 1067-1069.
6. Vorstman, J.A., Chow, E.W., Ophoff, R.A., van Engeland, H., Beemer, F.A., Kahn, R.S., Sinke, R.J. and Bassett, A.S. 2009. Association of the PIK4CA schizophrenia-susceptibility gene in adults with the 22q11.2 deletion syndrome. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 150B: 430-433.
7. Evans, D.G. 2009. Neurofibromatosis 2 (Bilateral acoustic neurofibromatosis, central neurofibromatosis, NF2, neurofibromatosis type II). *Genet. Med.* 11: 599-610.

CHROMOSOMAL LOCATION

Genetic locus: SUSD2 (mouse) mapping to 10 C1.

PROTOCOLS

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

PRODUCT

SUSD2 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SUSD2 shRNA Plasmid (m): sc-153937-SH and SUSD2 shRNA (m) Lentiviral Particles: sc-153937-V as alternate gene silencing products.

For independent verification of SUSD2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-153937A, sc-153937B and sc-153937C.

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 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

SUSD2 siRNA (m) is recommended for the inhibition of SUSD2 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 μ M in 66 μ l. 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 SUSD2 gene expression knockdown using RT-PCR Primer: SUSD2 (m)-PR: sc-153937-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.