SANTA CRUZ BIOTECHNOLOGY, INC.

IGSF9 siRNA (m): sc-146193

BACKGROUND

Ig (immunoglobulin) superfamily members exhibit functional characteristics including immune responses, growth factor signaling and cell adhesion. IGSF9 (immunoglobulin superfamily, member 9), also known as Nrt1 or IGSF9A, is a 1,179 amino acid single-pass type I membrane protein expressed in a wide variety of fetal tissues at eight and fourteen weeks of gestation. Belonging to the immunoglobulin superfamily and the Turtle family, IGSF9 is thought to play a role in dendrite outgrowth and synapse maturation. IGSF9 contains two fibronectin type-III domains and five Ig-like (immunoglobulin-like) domains. IGSF9 interacts with MAGI-2 and Shank 1, both of which contain SH3 (Src-homology 3) domains. Protein-protein interactions are central events in cellular signal transduction and are often mediated by SH3 domains. IGSF9 is encoded by a gene located on human chromosome 1q23.2 and mouse chromosome 1 H3.

REFERENCES

1. Lim, W.A., Richards, F.M. and Fox, R.O. 1994. Structural determinants of peptide-binding orientation and of sequence specificity in SH3 domains. Nature 372: 375-379.
2. Bates, E.E., Kissenpfennig, A., Peronne, C., Mattei, M.G., Fossiez, F., Malissen, B. and Lebecque, S. 2000. The mouse and human IGSF6 (DORA) genes map to the inflammatory bowel disease 1 locus and are embedded in an intron of a gene of unknown function. Immunogenetics 52: 112-120.
3. Luo, K., Zhang, W., Sui, L., Li, N., Zhang, M., Ma, X., Zhang, L. and Cao, X. 2001. DIgR1, a novel membrane receptor of the immunoglobulin gene superfamily, is preferentially expressed by antigen-presenting cells. Biochem. Biophys. Res. Commun. 287: 35-41.
4. Doudney, K., Murdoch, J.N., Braybrook, C., Paternotte, C., Bentley, L., Copp, A.J. and Stanier, P. 2002. Cloning and characterization of Igsf9 in mouse and human: a new member of the immunoglobulin superfamily expressed in the developing nervous system. Genomics 79: 663-670.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609738. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Robakis, T., Bak, B., Lin, S.H., Bernard, D.J. and Scheiffele, P. 2008. An internal signal sequence directs intramembrane proteolysis of a cellular immunoglobulin domain protein. J. Biol. Chem. 283: 36369-36376.
7. Ferguson, K., Long, H., Cameron, S., Chang, W.T. and Rao, Y. 2009. The conserved Ig superfamily member Turtle mediates axonal tiling in *Drosophila*. J. Neurosci. 29: 14151-14159.

CHROMOSOMAL LOCATION

Genetic locus: Igsf9 (mouse) mapping to 1 H3.

PROTOCOLS

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

PRODUCT

IGSF9 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IGSF9 shRNA Plasmid (m): sc-146193-SH and IGSF9 shRNA (m) Lentiviral Particles: sc-146193-V as alternate gene silencing products.

For independent verification of IGSF9 (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-146193A, sc-146193B and sc-146193C.

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

IGSF9 siRNA (m) is recommended for the inhibition of IGSF9 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 IGSF9 gene expression knockdown using RT-PCR Primer: IGSF9 (m)-PR: sc-146193-PR (20 µl). 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.