SANTA CRUZ BIOTECHNOLOGY, INC.

DSCAML1 siRNA (h): sc-96383

BACKGROUND

DSCAML1 (Down syndrome cell adhesion molecule-like protein 1), also known as DSCAM2, is a cell adhesion molecule that contains six Fibronectin type-III domains and ten Ig-like C2-type domains. DSCAML1 is involved in regulating isoneuronal self-avoidance, the tendency for sister arbors to avoid crossing each other and to spread out proportionately over an area. Isoneuronal self-avoidance is important for proper terminal branching (arborization). DSCAML1 also promotes heteroneuronal self-avoidance to maintain mosaic spacing between all amacrine cells. DSCAML1 is expressed in liver, skeletal muscle, brain, kidney, pancreas and heart and exists as two isoforms produced by alternative splicing events.

REFERENCES

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2. Agarwala, K.L., et al. 2001. Cloning and functional characterization of DSCAML1, a novel DSCAM-like cell adhesion molecule that mediates homophilic intercellular adhesion. Biochem. Biophys. Res. Commun. 285: 760-772.
3. Barlow, G.M., et al. 2002. Mammalian DSCAMs: roles in the development of the spinal cord, cortex, and cerebellum? Biochem. Biophys. Res. Commun. 293: 881-891.
4. Nakayama, M., et al. 2002. Protein-protein interactions between large proteins: two-hybrid screening using a functionally classified library composed of long cDNAs. Genome Res. 12: 1773-1784.
5. Uhl, G.R., et al. 2008. Molecular genetics of successful smoking cessation: convergent genome-wide association study results. Arch. Gen. Psychiatry 65: 683-693.
6. Pollin, T.I., et al. 2008. A null mutation in human APOC3 confers a favorable plasma lipid profile and apparent cardioprotection. Science 322: 1702-1705.
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CHROMOSOMAL LOCATION

Genetic locus: DSCAML1 (human) mapping to 11q23.3.

PRODUCT

DSCAML1 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 DSCAML1 shRNA Plasmid (h): sc-96383-SH and DSCAML1 shRNA (h) Lentiviral Particles: sc-96383-V as alternate gene silencing products.

For independent verification of DSCAML1 (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-96383A, sc-96383B and sc-96383C.

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

DSCAML1 siRNA (h) is recommended for the inhibition of DSCAML1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DSCAML1 gene expression knockdown using RT-PCR Primer: DSCAML1 (h)-PR: sc-96383-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.

PROTOCOLS

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