SANTA CRUZ BIOTECHNOLOGY, INC.

# CELSR3 siRNA (m): sc-60354

## BACKGROUND

*Drosophila* Flamingo is a seven pass transmembrane cadherin that is necessary for dendritic patterning and axon guidance. Flamingo mammalian homologs play similar roles in neuronal development, during which they play an important role in cell-cell signaling. Cadherin EGF LAG seven pass G type receptors (CELSRs) are multi-pass membrane proteins that belong to the G protein-coupled receptor family of proteins. Silencing CELSR2 gene expression results in signficant simplification of dendritic arbors of cortical pyramidal neurons and Purkinje neurons, which may be due to branch retraction. In mouse, CELSR1, CELSR2 and CELSR3 are expressed in the nervous system at early developmental stages, and show expression patterns in the developing CNS. CELSR2 is distributed at intercellular boundaries in the whisker and on processes of neuronal cells such as hippocampal pyramidal cells, Purkinje cells and olfactory neurons.

## REFERENCES


1. Vincent, J.B., et al. 2000. The human homologue of Flamingo, EGFL2, encodes a brain-expressed large cadherin-like protein with epidermal growth factor-like domains and maps to chromosome 1p13.3-p21.1. DNA Res. 7: 233-235.
2. Tissir, F., et al. 2002. Developmental expression profiles of CELSR (Flamingo) genes in the mouse. Mech. Dev. 112: 157-160.
3. Curtin, J.A., et al. 2003. Mutation of CELSR1 disrupts planar polarity of inner ear hair cells and causes severe neural tube defects in the mouse. Curr. Biol. 13: 1129-1133.
4. Georgieva, L., et al. 2003. Genetic variation in the seven-pass transmembrane cadherin CELSR1: lack of association with schizophrenia. Psychiatr. Genet. 13: 103-106.
5. Formstone, C.J., et al. 2005. Expression of the CELSR/Flamingo homologue, c-fmi1, in the early avian embryo indicates a conserved role in neural tube closure and additional roles in asymmetry and somitogenesis. Dev. Dyn. 232: 408-413.
6. Beall, S.A., et al. 2005. Hybrid GPCR/cadherin (CELSR) proteins in rat testis are expressed with cell type specificity and exhibit differential Sertoli cell-germ-cell adhesion activity. J. Androl. 26: 529-538.


## CHROMOSOMAL LOCATION

Genetic locus: Celsr3 (mouse) mapping to 9 F2.

## PRODUCT

CELSR3 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 CELSR3 shRNA Plasmid (m): sc-60354-SH and CELSR3 shRNA (m) Lentiviral Particles: sc-60354-V as alternate gene silencing products.

For independent verification of CELSR3 (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-60354A, sc-60354B and sc-60354C.

## 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

CELSR3 siRNA (m) is recommended for the inhibition of CELSR3 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 CELSR3 gene expression knockdown using RT-PCR Primer: CELSR3 (m)-PR: sc-60354-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.