SANTA CRUZ BIOTECHNOLOGY, INC.

PCDH11X siRNA (m): sc-106362

BACKGROUND

Protocadherins (PCDHs) are a subfamily of cadherins, a large group of related glycoproteins that mediate calcium-dependent cell-cell adhesion via a homophilic mechanism. Involved in a variety of functions, protocadherins help to regulate neural development and synapse formation. PCDH11X (protocadherin 11 X-linked), a 1,347 amino acid protein, and PCDH11Y (protocadherin 11 Y-linked), a 1,340 amino acid protein, are single-pass type I membrane proteins that each contain seven cadherin domains and each exist as multiple alternatively spliced isoforms. Expressed strongly in both adult and fetal brain tissue, PCDH11X and PCDH11Y function as calcium-dependent cell adhesion proteins that are essential for the segmental development and function of the central nervous system. Variations in the PCDH11X and PCDH11Y genes are associated with an increased susceptibility to brain-related afflictions, such as late-onset Alzheimer's disease.

REFERENCES

1. Yoshida, K. and Sugano, S. 1999. Identification of a novel protocadherin gene (PCDH11) on the human XY homology region in Xq21.3. Genomics 62: 540-543.
2. Yagi, T. and Takeichi, M. 2000. Cadherin superfamily genes: functions, genomic organization, and neurologic diversity. Genes Dev. 14: 1169-1180.
3. Nollet, F., et al. 2000. Phylogenetic analysis of the cadherin superfamily allows identification of six major subfamilies besides several solitary members. J. Mol. Biol. 299: 551-572.
4. Blanco, P., et al. 2000. Conservation of PCDHX in mammals; expression of human X/Y genes predominantly in brain. Mamm. Genome 11: 906-914.
5. Blanco-Arias, P., et al. 2004. Protocadherin X (PCDHX) and Y (PCDHY) genes; multiple mRNA isoforms encoding variant signal peptides and cytoplasmic domains. Mamm. Genome 15: 41-52.

CHROMOSOMAL LOCATION

Genetic locus: Pcdh11x (mouse) mapping to X E2.

PRODUCT

PCDH11X 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 PCDH11X shRNA Plasmid (m): sc-106362-SH and PCDH11X shRNA (m) Lentiviral Particles: sc-106362-V as alternate gene silencing products.

For independent verification of PCDH11X (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-106362A, sc-106362B and sc-106362C.

PROTOCOLS

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

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

PCDH11X siRNA (m) is recommended for the inhibition of PCDH11X 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 PCDH11X gene expression knockdown using RT-PCR Primer: PCDH11X (m)-PR: sc-106362-PR (20 µl, 438 bp). 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.