SANTA CRUZ BIOTECHNOLOGY, INC.

PCDHB8 siRNA (h): sc-91608

BACKGROUND

Protocadherins are a large family of cadherin-like cell adhesion proteins that are involved in the establishment and maintenance of neuronal connections in the brain. There are three protocadherin gene clusters, designated α, β and γ, all of which contain multiple tandemly arranged genes. PCDHB8 (protocadherin β-8), also known as PCDH3I (protocadherin-3I), is a 801 amino acid single pass transmembrane protein that is one of 16 proteins in the protocadherin β cluster. Unlike the α and γ gene clusters whose genes are spliced to downstream constant region exons during transcription, members of the β cluster (such as PCDHB8) do not use constant-region exons to produce mRNAs. As a result, each protocadherin β gene encodes the transmembrane, extracellular and short cytoplasmic domains of the protein. PCDHB8 is likely a calcium-dependent cell adhesion protein that is involved in the maintenance of neural connections in the brain.

REFERENCES

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3. Vanhalst, K., et al. 2001. The human and murine protocadherin-β one-exon gene families show high evolutionary conservation, despite the difference in gene number. FEBS Lett. 495: 120-125.
4. Wu, Q., et al. 2001. Comparative DNA sequence analysis of mouse and human protocadherin gene clusters. Genome Res. 11: 389-404.
5. Hamada, S., et al. 2001. The cadherin-related neuronal receptor family: a novel diversified cadherin family at the synapse. Neurosci. Res. 41: 207-215.
6. Morishita, H., et al. 2007. Protocadherin family: diversity, structure, and function. Curr. Opin. Cell Biol. 19: 584-592.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606334. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: PCDHB8 (human) mapping to 5q31.3.

PRODUCT

PCDHB8 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 PCDHB8 shRNA Plasmid (h): sc-91608-SH and PCDHB8 shRNA (h) Lentiviral Particles: sc-91608-V as alternate gene silencing products.

For independent verification of PCDHB8 (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-91608A, sc-91608B and sc-91608C.

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

PCDHB8 siRNA (h) is recommended for the inhibition of PCDHB8 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 PCDHB8 gene expression knockdown using RT-PCR Primer: PCDHB8 (h)-PR: sc-91608-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.