

PCNXL2 siRNA (h): sc-88388

BACKGROUND

Human Pecanex proteins are homologs of the *Drosophila* Pecanex protein, a maternal-effect neurogenic protein that is involved in normal development of the fly nervous system. Three human Pecanex homologs exist, designated Pecanex, Pecanex 2, and Pecanex 3. PCNXL2 (Pecanex-like protein 2) is a 2,137 amino acid multi-pass membrane protein that exists as five alternatively spliced isoforms characterized by high mutational frequencies and biallelic mutations in colorectal tumors, thereby likely functioning as a target gene in these tumors. PCNXL2 is encoded by a gene that maps to human chromosome 1q42.2, which is linked to an inherited microduplication. This microduplication that includes PCNXL2 may play a role in autism and mild mental retardation.

REFERENCES

1. Perrimon, N., Engstrom, L. and Mahowald, A.P. 1984. Developmental genetics of the 2E-F region of the *Drosophila* X chromosome: a region rich in "developmentally important" genes. *Genetics* 108: 559-572.
2. LaBonne, S.G. and Mahowald, A.P. 1985. Partial rescue of embryos from two maternal-effect neurogenic mutants by transplantation of wild-type ooplasm. *Dev. Biol.* 110: 264-267.
3. LaBonne, S.G., Sunitha, I. and Mahowald, A.P. 1989. Molecular genetics of Pecanex, a maternal-effect neurogenic locus of *Drosophila melanogaster* that potentially encodes a large transmembrane protein. *Dev. Biol.* 136: 1-16.
4. LaBonne, S.G. and Furst, A. 1989. Differentiation *in vitro* of neural precursor cells from normal and Pecanex mutant *Drosophila* embryos. *J. Neurogenet.* 5: 99-104.
5. Gilbert, T.L., Haldeman, B.A., Mulvihill, E. and O'Hara, P.J. 1992. A mammalian homologue of a transcript from the *Drosophila* Pecanex locus. *J. Neurogenet.* 8: 181-187.
6. Geisinger, A., Alsheimer, M., Baier, A., Benavente, R. and Wettstein, R. 2005. The mammalian gene Pecanex 1 is differentially expressed during spermatogenesis. *Biochim. Biophys. Acta* 1728: 34-43.

CHROMOSOMAL LOCATION

Genetic locus: PCNXL2 (human) mapping to 1q42.2.

PRODUCT

PCNXL2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PCNXL2 shRNA Plasmid (h): sc-88388-SH and PCNXL2 shRNA (h) Lentiviral Particles: sc-88388-V as alternate gene silencing products.

For independent verification of PCNXL2 (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-88388A, sc-88388B and sc-88388C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PCNXL2 siRNA (h) is recommended for the inhibition of PCNXL2 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 μ M in 66 μ l. 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 PCNXL2 gene expression knockdown using RT-PCR Primer: PCNXL2 (h)-PR: sc-88388-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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