SANTA CRUZ BIOTECHNOLOGY, INC.

BPLP siRNA (h): sc-88882

BACKGROUND

BPLP (basic proline-rich lacrimal protein), also known as proline-rich protein 1 (PRL1) or PROL1, is a 248 amino acid secreted protein belonging to the PROL1/PROL3 family. Abundantly expressed in lacrimal gland and moderately expressed in submandibular gland, BPLP is cleaved into opiorphin, an endogenous inhibitor of C10, also known as neprilysin, and CD13, also designated aminopeptidase N. A member of the opiorphin family, BPLP is suggested to be involved in erectile physiology. BPLP is encoded by a gene located on human chromsome 4, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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2. Hillier, L.W., et. al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
3. Cowan, C.M., et al. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75: 25-71.
4. Cunningham, M.L., et al. 2007. Syndromic craniosynostosis: from history to hydrogen bonds. Orthod. Craniofac. Res. 10: 67-81.
5. Versteegh, F.G., et al. 2007. EvC Working Party. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. Am. J. Med. Genet. A 143A: 2113-2121.
6. Tong, Y., et al. 2008. The opiorphin gene (ProL1) and its homologues function in erectile physiology. BJU Int. 102: 736-740.
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CHROMOSOMAL LOCATION

Genetic locus: PROL1 (human) mapping to 4q13.3.

PRODUCT

BPLP 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 BPLP shRNA Plasmid (h): sc-88882-SH and BPLP shRNA (h) Lentiviral Particles: sc-88882-V as alternate gene silencing products.

For independent verification of BPLP (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-88882A, sc-88882B and sc-88882C.

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

BPLP siRNA (h) is recommended for the inhibition of BPLP 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 BPLP gene expression knockdown using RT-PCR Primer: BPLP (h)-PR: sc-88882-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.