SANTA CRUZ BIOTECHNOLOGY, INC.

BLP2 siRNA (h): sc-90274

BACKGROUND

BLP2 (β-Amyloid-binding protein-like protein 2), also known as TM2D3 (TM2 domain-containing protein 3), is a 247 amino acid that belongs to the TM2 family. BLP2 contains several features of a G protein-coupled receptor, including two putative transmembrane domains in its C-terminal half, a DRY motif, and conserved cysteines and lysines. BLP2 is extensively expressed in neurons of the hippocampus/entorhinal cortex and neocortical regions, and may have regulatory roles in cell death and proliferation. The BLP2 gene maps to chromosome 15q26.3, and deletions in this chromosome are rare and may be associated with growth retardation, cardiac defects and developmental delay. Encoding more than 700 genes, chromosome 15 is made up of approximately 106 million base pairs and comprises about 3% of the human genome.

REFERENCES

1. Carmi, R., et al. 1995. Use of a DNA pooling strategy to identify a human obesity syndrome locus on chromosome 15. Hum. Mol. Genet. 4: 9-13.
2. Freedman, R., et al. 1997. Linkage of a neurophysiological deficit in schizophrenia to a chromosome 15 locus. Proc. Natl. Acad. Sci. USA 94: 587-592.
3. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. Nature 440: 671-675.
4. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610014. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Makoff, A.J., et al. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. Genome Biol. 8: R114.
6. Davidsson, J., et al. 2008. Array based characterization of a terminal deletion involving chromosome subband 15q26.2: an emerging syndrome associated with growth retardation, cardiac defects and developmental delay. BMC Med. Genet. 9: 2.
7. Rump, P., et al. 2008. Drayer's syndrome of mental retardation, microcephaly, short stature and absent phalanges is caused by a recurrent deletion of chromosome 15(q26.2→qter). Clin. Genet. 74: 455-462.

CHROMOSOMAL LOCATION

Genetic locus: TM2D3 (human) mapping to 15q26.3.

PRODUCT

BLP2 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 BLP2 shRNA Plasmid (h): sc-90274-SH and BLP2 shRNA (h) Lentiviral Particles: sc-90274-V as alternate gene silencing products.

For independent verification of BLP2 (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-90274A, sc-90274B and sc-90274C.

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

BLP2 siRNA (h) is recommended for the inhibition of BLP2 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 BLP2 gene expression knockdown using RT-PCR Primer: BLP2 (h)-PR: sc-90274-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.