SANTA CRUZ BIOTECHNOLOGY, INC.

CRALBPL siRNA (h): sc-77860

BACKGROUND

CRALBPL (cellular retinaldehyde-binding protein-like), also known as Retinaldehyde-binding protein 1-like protein 1, is a 354 amino acid protein that contains a CRAL-TRIO domain, which is typically present in lipid-binding SEC14-like proteins. CRALBPL has 45% sequence similarity to a retina and pineal gland-specific protein, CRALBP (cellular retinaldehyde-binding protein), which is likely involved in the visual process and may be implicated in visual diseases, such as retinitis pigmentosa, Newfoundland rod-cone dystrophy and retinitis punctata albescens. CRALBPL is expressed exclusively in the brain and localizes in the cytoplasm near CRALBP. Due to upregulation of the gene encoding CRALBPL in human hepatocellular carcinoma (HCC), it is suggested that CRALBPL may be a suitable HCC marker. There are two isoforms of CRALBPL that exist as a result of alternative splicing events.

REFERENCES

1. Intres, R., et al. 1994. Molecular cloning and structural analysis of the human gene encoding cellular retinaldehyde-binding protein. J. Biol. Chem. 269: 25411-25418.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 180090. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Kong, Y.H., et al. 2006. Cloning and characterization of a novel, human cellular retinaldehyde-binding protein CRALBP-like (CRALBPL) gene. Biotechnol. Lett. 28: 1327-1333.
4. Deeg, C.A., et al. 2007. CRALBP is a highly prevalent autoantigen for human autoimmune uveitis. Clin. Dev. Immunol. 2007: 39245.
5. Zhao, S., et al. 2008. Cellular retinaldehyde-binding protein-like (CRALBPL), a novel human Sec14p-like gene that is upregulated in human hepatocellular carcinomas, may be used as a marker for human hepatocellular carcinomas. DNA Cell Biol. 27: 159-163.
6. Collery, R., et al. 2008. Duplication and divergence of zebrafish CRALBP genes uncovers novel role for RPE- and Muller-CRALBP in cone vision. Invest. Ophthalmol. Vis. Sci. 49: 3812-3820.

CHROMOSOMAL LOCATION

Genetic locus: CLVS1 (human) mapping to 8q12.3.

PRODUCT

CRALBPL 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 CRALBPL shRNA Plasmid (h): sc-77860-SH and CRALBPL shRNA (h) Lentiviral Particles: sc-77860-V as alternate gene silencing products.

For independent verification of CRALBPL (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-77860A, sc-77860B and sc-77860C.

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

CRALBPL siRNA (h) is recommended for the inhibition of CRALBPL 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 CRALBPL gene expression knockdown using RT-PCR Primer: CRALBPL (h)-PR: sc-77860-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.