SANTA CRUZ BIOTECHNOLOGY, INC.

PHYHIPL siRNA (h): sc-90711

BACKGROUND

PHYHIPL (phytanoyl-CoA 2-hydroxylase interacting protein-like), also known as phytanoyl-CoA hydroxylase-interacting protein-like, is a 376 amino acid protein that contains one fibronectin type-III domain and belongs to the PHYHIP family. Conserved in chimpanzee, canine, mouse, rat, chicken, zebrafish and *Caenorhabditis elegans,* PHYHIPL exists as three alternatively spliced isoforms. PHYHIPL is a down-regulated target of IRX1, a homeobox tumor suppressor gene linked to gastric carcinoma. PHYHIPL may also play a role in the development of the central system. The gene that encodes PHYHIPL maps to human chromosome 10q21.1.

REFERENCES

1. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). Genome Res. 14: 2121-2127.
2. Deloukas, P., et al. 2004. The DNA sequence and comparative analysis of human chromosome 10. Nature 429: 375-381.
3. Grupe, A., et al. 2006. A scan of chromosome 10 identifies a novel locus showing strong association with late-onset Alzheimer disease. Am. J. Hum. Genet. 78: 78-88.
4. Gurok, U., et al. 2007. Laser capture microdissection and microarray analysis of dividing neural progenitor cells from the adult rat hippocampus. Eur. J. Neurosci. 26: 1079-1090.
5. Weikard, R., et al. 2009. Novel transcripts discovered by mining genomic DNA from defined regions of bovine chromosome 6. BMC Genomics 10: 186.
6. Guo, X., et al. 2010. Homeobox gene IRX1 is a tumor suppressor gene in gastric carcinoma. Oncogene 29: 3908-3920.

CHROMOSOMAL LOCATION

Genetic locus: PHYHIPL (human) mapping to 10q21.1.

PRODUCT

PHYHIPL 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 PHYHIPL shRNA Plasmid (h): sc-90711-SH and PHYHIPL shRNA (h) Lentiviral Particles: sc-90711-V as alternate gene silencing products.

For independent verification of PHYHIPL (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-90711A, sc-90711B and sc-90711C.

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.

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

PHYHIPL siRNA (h) is recommended for the inhibition of PHYHIPL 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.

GENE EXPRESSION MONITORING

PHYHIPL (F-3): sc-514256 is recommended as a control antibody for monitoring of PHYHIPL gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PHYHIPL gene expression knockdown using RT-PCR Primer: PHYHIPL (h)-PR: sc-90711-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.