SANTA CRUZ BIOTECHNOLOGY, INC.

VEPH1 siRNA (h): sc-63212

BACKGROUND

Ventricular zone-expressed PH domain-containing protein homolog 1 (VEPH1), also known as KIAA1692 or protein melted, is a 833 amino acid protein belonging to the MELT/VEPH family. VEPH1 is a peripheral membrane protein localized to the cytoplasmic side. VEPH1 has one PH domain which is required for the membrane targeting of the protein. The human gene encoding VEPH1 is 76% homologous to the *Drosophila* VEPH1 gene which encodes a protein that acts as a regulator of the Insulin signaling pathway. It is thought that this role of VEPH1 is conserved across species. VEPH1 exists as three isoforms produced by alternative splicing.

REFERENCES

1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XIX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 347-355.
2. Muto, E., et al. 2004. Identification and characterization of Veph, a novel gene encoding a PH domain-containing protein expressed in the developing central nervous system of vertebrates. Biochimie 86: 523-531.
3. Teleman, A.A., et al. 2005. *Drosophila* melted modulates FOXO and TOR activity. Dev. Cell 9: 271-281.
4. Barrios-Rodiles, M., et al. 2005. High-throughput mapping of a dynamic signaling network in mammalian cells. Science 307: 1621-1625.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609594. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Olsen, J.V., et al. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
7. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.

CHROMOSOMAL LOCATION

Genetic locus: VEPH1 (human) mapping to 3q25.31.

PRODUCT

VEPH1 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 VEPH1 shRNA Plasmid (h): sc-63212-SH and VEPH1 shRNA (h) Lentiviral Particles: sc-63212-V as alternate gene silencing products.

For independent verification of VEPH1 (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-63212A, sc-63212B and sc-63212C.

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

VEPH1 siRNA (h) is recommended for the inhibition of VEPH1 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 VEPH1 gene expression knockdown using RT-PCR Primer: VEPH1 (h)-PR: sc-63212-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.