SANTA CRUZ BIOTECHNOLOGY, INC.

EVT-2 siRNA (h): sc-94448

BACKGROUND

EVT-2 (evectin-2), also known as PLEKHB2 (Pleckstrin homology domain-containing family B member 2), is a 222 amino acid peripheral membrane protein that is potentially coupled to signal transduction pathways that result in lipid second messenger production. EVT-2 is closely related to PHR1, in that it carries a pleckstrin homology domain at its N-terminus and is inserted into membranes through a hydrophobic anchor at its C-terminus. However PHR1 is specifically expressed in photoreceptors and myelinating glia, whereas EVT-2 is widely expressed in neural and non-neural tissues alike. The gene encoding EVT-2 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. There are three isoforms of EVT-2 that are produced as a result of alternative splicing events.

REFERENCES

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2. 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.
3. Xu, S., et al. 2004. PHR1, a PH domain-containing protein expressed in primary sensory neurons. Mol. Cell. Biol. 24: 9137-9151.
4. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
5. Bloom, A.J., et al. 2007. The requirement for PHR1 in CNS axon tract formation reveals the corticostriatal boundary as a choice point for cortical axons. Genes Dev. 21: 2593-2606.
6. Culican, S.M., et al. 2009. Phr1 regulates retinogeniculate targeting independent of activity and ephrin-A signalling. Mol. Cell. Neurosci. 41: 304-312.

CHROMOSOMAL LOCATION

Genetic locus: PLEKHB2 (human) mapping to 2q21.1.

PRODUCT

EVT-2 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 EVT-2 shRNA Plasmid (h): sc-94448-SH and EVT-2 shRNA (h) Lentiviral Particles: sc-94448-V as alternate gene silencing products.

For independent verification of EVT-2 (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-94448A, sc-94448B and sc-94448C.

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

EVT-2 siRNA (h) is recommended for the inhibition of EVT-2 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 EVT-2 gene expression knockdown using RT-PCR Primer: EVT-2 (h)-PR: sc-94448-PR (20 µl, 521 bp). 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.