SANTA CRUZ BIOTECHNOLOGY, INC.

EVT-2 siRNA (m): sc-144966

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

1. Krappa, R., Nguyen, A., Burrola, P., Deretic, D. and Lemke, G. 1999. Evectins: vesicular proteins that carry a Pleckstrin homology domain and localize to post-Golgi membranes. Proc. Natl. Acad. Sci. USA 96: 4633-4638.
2. Gerhard, D.S., Wagner, L., Feingold, E.A., Shenmen, C.M., Grouse, L.H., Schuler, G., Klein, S.L., Old, S., Rasooly, R., Good, P., Guyer, M., Peck, A.M., Derge, J.G., Lipman, D., Collins, F.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., Wang, Y., Zhao, H., Zhang, L., Xiong, W., Yau, K.W., Hiel, H., Glowatzki, E., Ryugo, D.K. and Valle, D. 2004. PHR1, a PH domain-containing protein expressed in primary sensory neurons. Mol. Cell. Biol. 24: 9137-9151.
4. Ota, T., Suzuki, Y., Nishikawa, T., Otsuki, T., Sugiyama, T., Irie, R., Wakamatsu, A., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Sekine, M., Obayashi, M., Nishi, T., Shibahara, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
5. Bloom, A.J., Miller, B.R., Sanes, J.R. and DiAntonio, A. 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.

CHROMOSOMAL LOCATION

Genetic locus: Plekhb2 (mouse) mapping to 1 B.

PRODUCT

EVT-2 siRNA (m) 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 (m): sc-144966-SH and EVT-2 shRNA (m) Lentiviral Particles: sc-144966-V as alternate gene silencing products.

For independent verification of EVT-2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-144966A, sc-144966B and sc-144966C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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 (m) is recommended for the inhibition of EVT-2 expression in mouse 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 (m)-PR: sc-144966-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.