

EVT-2 (Y-12): sc-161569

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.
6. Culican, S.M., Bloom, A.J., Weiner, J.A. and DiAntonio, A. 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; Plekhh2 (mouse) mapping to 1 B.

SOURCE

EVT-2 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of EVT-2 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161569 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EVT-2 (Y-12) is recommended for detection of EVT-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for EVT-2 siRNA (h): sc-94448, EVT-2 siRNA (m): sc-144966, EVT-2 shRNA Plasmid (h): sc-94448-SH, EVT-2 shRNA Plasmid (m): sc-144966-SH, EVT-2 shRNA (h) Lentiviral Particles: sc-94448-V and EVT-2 shRNA (m) Lentiviral Particles: sc-144966-V.

Molecular Weight of EVT-2: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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