Produktinformation

Y Forschungsprodukte & Biochemikalien

Zellkultur & Verbrauchsmaterial

Diagnostik & molekulare Diagnostik

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

plexin-D1 shRNA (h) Lentiviral Particles: sc-45585-V

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

Plexins are a family of large transmembrane receptors for multiple classes of semaphorins. Plexins are widely expressed and may act as semaphorin receptors alone or in combination with neuropilins. Plexins are divided into four subfamilies, plexin-A, -B, -C and -D. Plexin-D1 is expressed strongly in endothelial cells of developing blood vessels and in lower levels in placenta, heart, brain, kidney, testis and lung. Expression is more robust in mouse and human embryonic cells than in adult cells, and the protein is detected in early ganglia, cortex and striatum. The gene PLXND1, which encodes for the protein, localizes to chromosome 3q22.1. A defect in this gene causes the dominantly inherited disorder Möbius syndrome 2 (MBS2) which is characterized by paralysis of the facial nerve.

REFERENCES

1. Tamagnone, L., et al.1999. Plexins are a large family of receptors for transmembrane, secreted, and GPI-anchored semaphorins in vertebrates. Cell 99: 71-80.

2. Li, S., et al. 2004. Advanced cardiac morphogenesis does not require heart tube fusion. Science 305: 1619-1622.

3. van der Zwaag, B., et al. 2004. Sequence analysis of the plexin-D1 gene in Mobius syndrome patients. Pediatr. Neurol. 31: 114-118.

4. Deutsch, U. 2004. Semaphorins guide PerPlexeD endothelial cells. Dev. Cell 7: 1-2.

5. Gitler, A.D., et al. 2004. Plexin-D1 and semaphorin signaling are required in endothelial cells for cardiovascular development. Dev. Cell 7: 107-116.

6. Torres-Vazquez, J., et al. 2004. Semaphorin-plexin signaling guides patterning of the developing vasculature. Dev. Cell 7: 117-123.

7. Perala, N.M., et al. 2005. The expression of plexins during mouse embryogenesis. Gene Expr. Patterns 5: 355-362.

8. Gu, C., et al. 2005. Semaphorin 3E and plexin-D1 control vascular pattern independently of neuropilins. Science 307: 265-268.

CHROMOSOMAL LOCATION

Genetic locus: PLXND1 (human) mapping to 3q22.1.

PRODUCT

plexin-D1 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0×10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see plexin-D1 siRNA (h): sc-45585 and plexin-D1 shRNA Plasmid (h): sc-45585-SH as alternate gene silencing products.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

APPLICATIONS

plexin-D1 shRNA (h) Lentiviral Particles is recommended for the inhibition of plexin-D1 expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0×10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

GENE EXPRESSION MONITORING

plexin-D1 (E-13): sc-46245 is recommended as a control antibody for monitoring of plexin-D1 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 (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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor plexin-D1 gene expression knockdown using RT-PCR Primer: plexin-D1 (h)-PR: sc-45585-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

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