



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# plexin-D1 siRNA (h): sc-45585

## 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. van der Zwaag, B., et al. 2004. Sequence analysis of the PLEXIN-D1 gene in Möbius syndrome patients. *Pediatr. Neurol.* 31: 114-118.
3. Deutsch, U. 2004. Semaphorins guide PerPlexeD endothelial cells. *Dev. Cell* 7: 1-2.
4. Gitler, A.D., et al. 2004. Plexin-D1 and semaphorin signaling are required in endothelial cells for cardiovascular development. *Dev. Cell* 7: 107-116.
5. Torres-Vazquez, J., et al. 2004. Semaphorin-plexin signaling guides patterning of the developing vasculature. *Dev. Cell* 7: 117-123.
6. Li, S., et al. 2004. Advanced cardiac morphogenesis does not require heart tube fusion. *Science* 305: 1619-1622.
7. Peralá, N.M., et al. 2005. The expression of plexins during mouse embryogenesis. *Gene Expr. Patterns* 5: 355-362.
8. Gu, C. 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 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see plexin-D1 shRNA Plasmid (h): sc-45585-SH and plexin-D1 shRNA (h) Lentiviral Particles: sc-45585-V as alternate gene silencing products.

For independent verification of plexin-D1 (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-45585A, sc-45585B and sc-45585C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

plexin-D1 siRNA (h) is recommended for the inhibition of plexin-D1 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  $\mu$ M in 66  $\mu$ l. 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 plexin-D1 gene expression knockdown using RT-PCR Primer: plexin-D1 (h)-PR: sc-45585-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.