

Vasohibin-1 siRNA (h): sc-61776

BACKGROUND

Angiogenesis is mainly regulated by the balance of several different pro-angiogenic stimulators, such as vascular endothelial growth factor (VEGF) and a diverse group of endogenous inhibitors that are extrinsic to endothelial cells. Vasohibin is a secreted protein that is induced by a specific, self-regulating, feedback inhibition response to inhibit angiogenesis in an autocrine manner. It inhibits proliferation, migration, and network formation by endothelial cells. This function is specific for endothelial cells as it does not affect migration in other cell types. Vasohibin is primarily expressed in endothelial of the brain and placental tissues with highest abundance in fetal organs. VEGF and fibroblast growth factor 2 up-regulate the expression of Vasohibin. *In vitro*, Vasohibin does not affect cancer cell proliferation, but does inhibit tumor growth and angiogenesis.

REFERENCES

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4. Katoh, Y., et al. 2006. Comparative integromics on Angiopoietin family members. *Int. J. Mol. Med.* 17: 1145-1149.
5. Sato, Y. 2006. A novel angiogenesis inhibitor vasohibin. *Seikagaku* 78: 763-767.
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CHROMOSOMAL LOCATION

Genetic locus: VASH1 (human) mapping to 14q24.3.

PRODUCT

Vasohibin-1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Vasohibin-1 shRNA Plasmid (h): sc-61776-SH and Vasohibin-1 shRNA (h) Lentiviral Particles: sc-61776-V as alternate gene silencing products.

For independent verification of Vasohibin-1 (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-61776A, sc-61776B and sc-61776C.

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

APPLICATIONS

Vasohibin-1 siRNA (h) is recommended for the inhibition of Vasohibin-1 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

Vasohibin-1 (C-6): sc-365541 is recommended as a control antibody for monitoring of Vasohibin-1 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 reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Vasohibin-1 gene expression knockdown using RT-PCR Primer: Vasohibin-1 (h)-PR: sc-61776-PR (20 μ l). 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.

PROTOCOLS

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