

Vasohibin-2 siRNA (h): sc-78558

BACKGROUND

Angiogenesis is 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-2, also known as VASH2, is a 355 amino acid protein belonging to the vasohibin family. Expressed in various embryonic organs, Vasohibin-2 can be detected during embryonic weeks 6 through 12 and is found in vessels of 20-week embryonic organs as well as in endothelial cells of neonatal large vessels. Induced by VEGF, Vasohibin-2 is an angiogenesis inhibitor and interferes with the proliferation, migration and network formation by endothelial cells. Vasohibin-2 exists as 5 isoforms and is encoded by a gene located on human chromosome 1q32.3, which houses over 3,000 genes and is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome.

REFERENCES

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2. Watanabe, K., et al. 2004. Vasohibin as an endothelium-derived negative feedback regulator of angiogenesis. *J. Clin. Invest.* 114: 898-907.
3. Shimizu, K., et al. 2005. Gene regulation of a novel angiogenesis inhibitor, vasohibin, in endothelial cells. *Biochem. Biophys. Res. Commun.* 327: 700-706.
4. Katoh, Y. and Katoh, M. 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.
6. Shen, J., et al. 2006. Vasohibin is upregulated by VEGF in the retina and suppresses VEGF receptor 2 and retinal neovascularization. *FASEB J.* 20: 723-725.

CHROMOSOMAL LOCATION

Genetic locus: VASH2 (human) mapping to 1q32.3.

PRODUCT

Vasohibin-2 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-2 shRNA Plasmid (h): sc-78558-SH and Vasohibin-2 shRNA (h) Lentiviral Particles: sc-78558-V as alternate gene silencing products.

For independent verification of Vasohibin-2 (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-78558A, sc-78558B and sc-78558C.

PROTOCOLS

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

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-2 siRNA (h) is recommended for the inhibition of Vasohibin-2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Vasohibin-2 gene expression knockdown using RT-PCR Primer: Vasohibin-2 (h)-PR: sc-78558-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.