SANTA CRUZ BIOTECHNOLOGY, INC.

Vasorin siRNA (h): sc-61778

BACKGROUND

Vasorin (SLITL2, slit-like 2 *(Drosophila)*) is a secreted type I membrane protein that participates in vertebrate axis patterning, axon guidance, and vessel development. Vasorin contains tandem leucine-rich repeats, an EGF-like motif, and a fibronectin type III-like motif in the extracellular domain. Vasorin transcripts appear in aorta, with moderate expression in kidney and placenta. Vasorin directly binds to transforming growth factor (TGF)-β and attenuates TGF-β signaling *in vitro*. Down-regulation of Vasorin expression contributes to neointimal formation after vascular injury and this mechanism modulates response to pathological stimuli in vessel walls. Subsequently, Vasorin is a potential therapeutic target for vascular fibroproliferative disorders.

REFERENCES

1. Grainger, D.J. 2004. Transforming growth factor β and atherosclerosis: so far, so goo protective cytokine hypothesis. Arterioscler. Thromb. Vasc. Biol. 24: 399-404.
2. Ikeda, Y., et al. 2004. Vasorin, a transforming growth factor β-binding protein expressed in vascular smooth muscle cells, modulates the arterial response to injury *in vivo*. Proc. Natl. Acad. Sci. USA 101: 10732-10737.
3. Bertolino, P., et al. 2005. Transforming growth factor-β signal transduction in angiogenesis and vascular disorders. Chest 128: 585S-590S.
4. Chen, L., et al. 2005. Slit-like 2, a central neural and vascular morphogenesis. Biochem. Biophys. Res. Commun. 336: 364-371.
5. Ghosh, J., et al. 2005. The role of transforming growth factor β1 in the vascular system. Cardiovasc. Pathol. 14: 28-36.
6. Ishisaki, A. and Matsuno, H. 2006. Novel ideas of gene therapy for atherosclerosis: modulation of cellular signal transduction of TGF-β family. Curr. Pharm. Des. 12: 877-886.

CHROMOSOMAL LOCATION

Genetic locus: VASN (human) mapping to 16p13.3.

PRODUCT

Vasorin 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Vasorin shRNA Plasmid (h): sc-61778-SH and Vasorin shRNA (h) Lentiviral Particles: sc-61778-V as alternate gene silencing products.

For independent verification of Vasorin (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-61778A, sc-61778B and sc-61778C.

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.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Vasorin siRNA (h) is recommended for the inhibition of Vasorin 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 µM in 66 µl. 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

Vasorin (4G7): sc-517034 is recommended as a control antibody for monitoring of Vasorin 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 Vasorin gene expression knockdown using RT-PCR Primer: Vasorin (h)-PR: sc-61778-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.