

# VEGFR1 siRNA (h): sc-29319

## BACKGROUND

Three cell membrane receptor tyrosine kinases, Flt-1 (also designated VEGF-R1), Flk-1 (also designated VEGF-R2) and Flt-4, putatively involved in the growth of endothelial cells, are characterized by the presence of seven immunoglobulin-like sequences in their extracellular domain. These receptors exhibit high degrees of sequence relatedness to each other as well as lesser degrees of relatedness to the class III receptors including CSF-1/Fms, PDGR, SLFR/Kit and Flt-3/Flk-2. Two members of this receptor class, Flt-1 and Flk-1, have been shown to represent high affinity receptors for vascular endothelial growth factors (VEGFs). On the basis of structural similarity to Flt-1 and Flk-1, it has been speculated that Flt-4 might represent a third receptor for either VEGF or a VEGF-related ligand.

## CHROMOSOMAL LOCATION

Genetic locus: FLT1 (human) mapping to 13q12.2.

## PRODUCT

VEGFR1 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 VEGFR1 shRNA Plasmid (h): sc-29319-SH and VEGFR1 shRNA (h) Lentiviral Particles: sc-29319-V as alternate gene silencing products.

For independent verification of VEGFR1 (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-29319A, sc-29319B and sc-29319C.

## 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

VEGFR1 siRNA (h) is recommended for the inhibition of VEGFR1 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.

## GENE EXPRESSION MONITORING

VEGFR1 (D-2): sc-271789 is recommended as a control antibody for monitoring of VEGFR1 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).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor VEGFR1 gene expression knockdown using RT-PCR Primer: VEGFR1 (h)-PR: sc-29319-PR (20  $\mu$ l, 495 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

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- Zhao, H., et al. 2018. VEGF mitigates histone-induced pyroptosis in the remote liver injury associated with renal allograft ischemia-reperfusion injury in rats. *Am. J. Transplant.* 18: 1890-1903.
- Xu, S., et al. 2018. EBV-LMP1 is involved in vasculogenic mimicry formation via VEGFA/VEGFR1 signaling in nasopharyngeal carcinoma. *Oncol. Rep.* 40: 377-384.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.