

FHR-1 siRNA (m): sc-145171

BACKGROUND

The factor H gene family is a multidomain, multifunctional protein family whose individual members are defined by conserved structural elements, which display diverse yet often overlapping functions. These proteins share a common structural motif, the Short Consensus Repeat (SCR), which is structurally conserved among related genes and between phylogenetically divergent species. The human complement factor H (FH, CFH, HUS, β -1H) gene encodes a 1,213 amino acid serum glycoprotein, which is arranged into 20 SCRs, each approximately 60 amino acids long and an 18-residue leader sequence. Four factor H-related proteins have been identified that are coded by four genes, FHR1, FHR2, FHR3, and FHR4, which are all closely linked to the Factor H gene on chromosome 1q31.3. FHR-1, along with FHR-2 and FHR-4, are constituents of lipoproteins, while FHR-3 interacts with heparin.

REFERENCES

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2. Zipfel, P.F., Jokiranta, T.S., Hellwage, J., Koistinen, V. and Meri, S. 1999. The factor H protein family. *Immunopharmacology* 42: 53-60.
3. Diaz-Guillen, M.A., Rodriguez de Cordoba, S. and Heine-Suner, D. 1999. A radiation hybrid map of complement factor H and factor H-related genes. *Immunogenetics* 49: 549-552.
4. Male, D.A., Ormsby, R.J., Ranganathan, S., Giannakis, E. and Gordon, D.L. 2000. Complement factor H: sequence analysis of 221 kb of human genomic DNA containing the entire fH, fHR-1 and fHR-3 genes. *Mol. Immunol.* 37: 41-52.
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CHROMOSOMAL LOCATION

Genetic locus: *Cfhr1* (mouse) mapping to 1 F.

PRODUCT

FHR-1 siRNA (m) 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 FHR-1 shRNA Plasmid (m): sc-145171-SH and FHR-1 shRNA (m) Lentiviral Particles: sc-145171-V as alternate gene silencing products.

For independent verification of FHR-1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145171A, sc-145171B and sc-145171C.

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

FHR-1 siRNA (m) is recommended for the inhibition of FHR-1 expression in mouse 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 FHR-1 gene expression knockdown using RT-PCR Primer: FHR-1 (m)-PR: sc-145171-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.