

CD59 siRNA (h): sc-37249

BACKGROUND

CD59 is a GPI-anchored glycoprotein that is expressed on leukocytes, vascular endothelial cells, various epithelial cells and placenta. CD59 acts together with CD58 in mediating T cell adhesion and activation, and it may be a second ligand of CD2. CD59 functions as a regulator of the terminal pathway of complement by binding to the C8/C9 components of the assembling membrane attack complex (MAC) on host cell membranes, to stop the formation of the lytic pore. CD59 also drives both calcium release and activation of lipid-raft associated signalling molecules such as tyrosine kinases. CD59 gene has two p53-responsive domains that may be implicated in the defense of host cells from damage by the complement system in inflammation, suggesting that p53 could be used to mediate susceptibility of tumor cells to the complement lysis during chemotherapy.

REFERENCES

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- Giddings, K.S., et al. 2004. Human CD59 is a receptor for the cholesterol-dependent cytolysin intermedilysin. *Nat. Struct. Mol. Biol.* 11: 1173-1178.
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- Storstein, A., et al. 2004. Heterogeneous expression of CD59 on human Purkinje cells. *Neurosci. Lett.* 362: 21-25.
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CHROMOSOMAL LOCATION

Genetic locus: CD59 (human) mapping to 11p13.

PRODUCT

CD59 siRNA (h) is a pool of 2 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 CD59 shRNA Plasmid (h): sc-37249-SH and CD59 shRNA (h) Lentiviral Particles: sc-37249-V as alternate gene silencing products.

For independent verification of CD59 (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-37249A and sc-37249B.

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

CD59 siRNA (h) is recommended for the inhibition of CD59 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

CD59 (H-7): sc-133170 is recommended as a control antibody for monitoring of CD59 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 CD59 gene expression knockdown using RT-PCR Primer: CD59 (h)-PR: sc-37249-PR (20 μ l, 470 bp). 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.