



CD48 siRNA (h): sc-35008

BACKGROUND

CD48 is a GPI-anchored glycoprotein that may act as a low affinity receptor for CD2. CD48 is expressed on all peripheral blood T, B and null cells, thymocytes, eosinophils, a portion of bone marrow cells and some epithelial cells. Rat CD48 is found on hematopoietic and endothelial cells, and mouse CD48 is found on thymocytes, lymph node cells, most macrophages and bone marrow cells. CD48 has been shown to be associated with the tyrosine kinase Lck.

REFERENCES

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3. Arvieux, J., et al. 1986. Monoclonal antibodies against a rat leucocyte antigen block antigen-induced T-cell responses via an effect on accessory cells. *Immunology* 58: 337-342.
4. Bazil, V., et al. 1989. Monoclonal antibodies against human leucocyte antigens. III. Antibodies against CD45R, CD6, CD44 and two newly described broadly expressed glycoproteins MEM-53 and MEM-102. *Folia Biol.* 35: 289-297.
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7. Garnett, D., et al. 1993. The association of the protein tyrosine kinases p56^{lck} and p60^{lyn} with the glycosyl phosphatidylinositol-anchored proteins Thy-1 and CD48 in rat thymocytes is dependent on the state of cellular activation. *Eur. J. Immunol.* 23: 2540-2544.
8. Katsuura, M., et al. 1994. Increased expression of CD48 on neutrophils activated in childhood patients with aplastic anemia. *Int. J. Hematol.* 60: 281-285.
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CHROMOSOMAL LOCATION

Genetic locus: CD48 (human) mapping to 1q23.3.

PRODUCT

CD48 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 CD48 shRNA Plasmid (h): sc-35008-SH and CD48 shRNA (h) Lentiviral Particles: sc-35008-V as alternate gene silencing products.

For independent verification of CD48 (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-35008A, sc-35008B and sc-35008C.

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

CD48 shRNA (h) Lentiviral Particles is recommended for the inhibition of CD48 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

CD48 (5-4.8): sc-8400 is recommended as a control antibody for monitoring of CD48 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 CD48 gene expression knockdown using RT-PCR Primer: CD48 (h)-PR: sc-35008-PR (20 μ l, 442 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.