

CD36 siRNA (r): sc-270644

BACKGROUND

CD36 (collagen type I receptor, thrombospondin receptor, FAT, GP4, GP3B, GPIV, PASIV, SCARB3) is a membrane glycoprotein on platelets, monocytes and umbilical vein endothelial cells. CD36 binds to collagen, thrombospondin, anionic phospholipids and oxidized LDL. CD36 plays a key role in both phagocytosis and lipid recycling, for constant production of mature spermatozoa. Mutations in this gene cause platelet glycoprotein deficiency. Three alternatively spliced transcript variants encoding the same protein isoform have been found for this gene. Thrombospondins are widely distributed proteins that influence a variety of adhesive processes and CD36 may have important functions as a cell adhesion molecule.

REFERENCES

- Greenwalt, D.E., et al. 1992. Membrane glycoprotein CD36: a review of its role in adherence, signal transduction, and transfusion medicine. *Blood* 80: 1105-1115.
- Daniel, J.L., et al. 1994. Collagen induces normal signal transduction in platelets deficient in CD36 (platelet glycoprotein IV). *Thromb. Haemost.* 71: 353-356.
- Alessio, M., et al. 1996. Synthesis, processing, and intracellular transport of CD36 during monocytic differentiation. *J. Biol. Chem.* 271: 1770-1775.
- Navazo, M.D., et al. 1996. Identification of a domain (155-183) on CD36 implicated in the phagocytosis of apoptotic neutrophils. *J. Biol. Chem.* 271: 15381-15385.
- Dawson, D.W., et al. 1997. CD36 mediates the *in vitro* inhibitory effects of thrombospondin-1 on endothelial cells. *J. Cell Biol.* 138: 707-717.

CHROMOSOMAL LOCATION

Genetic locus: Cd36 (rat) mapping to 4q11.

PRODUCT

CD36 siRNA (r) 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 CD36 shRNA Plasmid (r): sc-270644-SH and CD36 shRNA (r) Lentiviral Particles: sc-270644-V as alternate gene silencing products.

For independent verification of CD36 (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270644A, sc-270644B and sc-270644C.

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

CD36 siRNA (r) is recommended for the inhibition of CD36 expression in rat 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

CD36 (SM ϕ): sc-7309 is recommended as a control antibody for monitoring of CD36 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 MarkerTM 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 CD36 gene expression knockdown using RT-PCR Primer: CD36 (r)-PR: sc-270644-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

- Flores, J.J., et al. 2016. PPAR γ -induced upregulation of CD36 enhances hematoma resolution and attenuates long-term neurological deficits after germinal matrix hemorrhage in neonatal rats. *Neurobiol. Dis.* 87: 124-133.

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.