

P-Selectin siRNA (h): sc-29421

BACKGROUND

Selectins, also designated CD62 antigens, comprise a family of carbohydrate-binding proteins involved in mediating cellular interactions with leukocytes. L-Selectin (also designated LECAM-1 or CD62L) is expressed on the majority of B and naive T cells and on most monocytes, neutrophils and eosinophils. L-Selectin interacts with specific carbohydrates expressed by activated endothelial cells. P-Selectin (also designated GMP-140 or CD62P), expressed on activated platelets and endothelial cells, and E-Selectin (also designated ELMA-1 or CD62E), expressed on endothelial cells, exhibit overlapping ligand specificities. Both recognize sialyl-Le^x as a ligand and bind to specific carbohydrates on neutrophils and monocytes.

REFERENCES

1. Varki, A. 1994. Selectin ligands. *Proc. Natl. Acad. Sci. USA* 91: 7390-7397.
2. Tedder, T.F., et al. 1995. The selectins: vascular adhesion molecules. *FASEB J.* 10: 866-873.
3. Lasky, L.A. 1995. Selectin-carbohydrate interactions and the initiation of the inflammatory response. *Annu. Rev. Biochem.* 64: 113-139.
4. Pavalko, F.M., et al. 1995. The cytoplasmic domain of L-Selectin interacts with cytoskeletal proteins via α -actinin: receptor positioning in microvilli does not require interaction with α -actinin. *J. Cell Biol.* 129: 1155-1164.
5. Rosen, S.D., et al. 1996. Two selectins converge on sulphate. *Leukocyte adhesion. Curr. Biol.* 6: 261-264.
6. McEver, R.P., et al. 1996. Leukocyte trafficking mediated by selectin-carbohydrate interactions. *J. Biol. Chem.* 270: 11025-11028.
7. Diacovo, T.G., et al. 1996. Platelet-mediated lymphocyte delivery to high endothelial venules. *Science* 273: 252-255.
8. Frenette, P.S., et al. 1996. Susceptibility to infection and altered hematopoiesis in mice deficient in both P- and E-Selectins. *Cell* 84: 563-574.

CHROMOSOMAL LOCATION

Genetic locus: SELP (human) mapping to 1q24.2.

PRODUCT

P-Selectin 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 P-Selectin shRNA Plasmid (h): sc-29421-SH and P-Selectin shRNA (h) Lentiviral Particles: sc-29421-V as alternate gene silencing products.

For independent verification of P-Selectin (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-29421A, sc-29421B and sc-29421C.

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

P-Selectin siRNA (h) is recommended for the inhibition of P-Selectin 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

P-Selectin (CTB201): sc-8419 is recommended as a control antibody for monitoring of P-Selectin 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 P-Selectin gene expression knockdown using RT-PCR Primer: P-Selectin (h)-PR: sc-29421-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.