SANTA CRUZ BIOTECHNOLOGY, INC.

CD42d siRNA (m): sc-63265

BACKGROUND

In the early phase of primary hemostasis, platelets adhere to damaged blood vessel walls by binding via the CD42 complex, also designated platelet glycoprotein (GP) complex, to the von Willebrand factor (vWf) protein, which is exposed on the subendothelium. The CD42 complex contains four subunits, CD42b (GPIb α) and CD42c (GPIb β), which are linked by a disulfide bridge, and CD42a (GPIX) and CD42d (GPV), which are noncovalently linked to the complex. The CD42 complex is specifically expressed in platelets and megakaryocytes. Cleavage of CD42d by thrombin produces a soluble fragment and a membrane associated fragment, which merits CD42d as a useful marker for platelet activation by thrombin. The gene encoding human CD42d maps to chromosome 3q29.

REFERENCES

1. Lanza, F., et al. 1993. Cloning and characterization of the gene encoding the human platelet glycoprotein V. A member of the leucine-rich glycoprotein family cleaved during thrombin-induced platelet activation. J. Biol. Chem. 268: 20801-20807.
2. Clemetson, K.J., et al. 1995. Platelet GPIb-V-IX complex. Structure, function, physiology, and pathology. Semin. Thromb. Hemost. 21: 130-136.
3. Koskela, S., et al. 1998. Genetic polymorphism in human platelet glycoprotein GP Ib/IX/V complex is enriched in GP V (CD42d). Tissue Antigens 52: 236-241.
4. Kahn, M.L., et al. 1999. Glycoprotein V-deficient platelets have undiminished thrombin responsiveness and Do not exhibit a Bernard-Soulier phenotype. Blood 94: 4112-4121.
5. Ravanat, C., et al. 2000. GPV is a marker of *in vivo* platelet activation—study in a rat thrombosis model. Thromb. Haemost. 83: 327-333.
6. Moog, S., et al. 2001. Platelet glycoprotein V binds to collagen and participates in platelet adhesion and aggregation. Blood 98: 1038-1046.

CHROMOSOMAL LOCATION

Genetic locus: Gp5 (mouse) mapping to 16 B2.

PRODUCT

CD42d 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD42d shRNA Plasmid (m): sc-63265-SH and CD42d shRNA (m) Lentiviral Particles: sc-63265-V as alternate gene silencing products.

For independent verification of CD42d (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-63265A, sc-63265B and sc-63265C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CD42d siRNA (m) is recommended for the inhibition of CD42d 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 µM in 66 µl. 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 CD42d gene expression knockdown using RT-PCR Primer: CD42d (m)-PR: sc-63265-PR (20 µl). 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.