SANTA CRUZ BIOTECHNOLOGY, INC.

CD9 siRNA (m): sc-37252

BACKGROUND

CD9 is a type IV transmembrane glycoprotein with four transmembrane domains. CD9 on pre-B cells may play a role in cell-cell adhesion. In addition, CD9 may play a role in signal transduction mediated by interaction with low molecular weight GTP-binding proteins. CD9 is expressed on early B cells, eosinophils, basophils and activated T cells and is a major component of the platelet cell surface. It is also expressed on most non-T acute lymphoblastic leukemia cells and on some acute myeloid and chronic lymphoid leukemias.

REFERENCES

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2. Lanza, F., et al. 1991. cDNA cloning and expression of platelet p24/CD9. Evidence for a new family of multiple membrane-spanning proteins. J. Biol. Chem. 266: 10638-10645.
3. Seehafer, J.G., et al. 1991. Evidence that the signal-initiating membrane protein CD9 is associated with small GTP-binding proteins. Biochem. Biophys. Res. Commun. 179: 401-406.
4. Masellis-Smith, A., et al. 1994. CD9-regulated adhesion. Anti-CD9 monoclonal antibody induce pre-B cell adhesion to bone marrow fibroblasts through *de novo* recognition of Fibronectin. J. Immunol. 152: 2768-2777.
5. Wright, M.D., et al. 1994. The ins and outs of the transmembrane 4 superfamily. Immunol. Today 15: 588-594.
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7. Le Naour, F., et al. 1997. Upregulation of CD9 expression during TPA treatment of K-562 cells. Leukemia 11: 1290-1297.
8. Slupsky, J.R., et al. 1997. Analysis of CD9, CD32 and p67 signalling; use of degranulated platelets indicates direct involvement of CD9 and p67 in Integrin activation. Br. J. Haemotol. 96: 275-286.

CHROMOSOMAL LOCATION

Genetic locus: Cd9 (mouse) mapping to 6 F3.

PRODUCT

CD9 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 CD9 shRNA Plasmid (m): sc-37252-SH and CD9 shRNA (m) Lentiviral Particles: sc-37252-V as alternate gene silencing products.

For independent verification of CD9 (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-37252A, sc-37252B and sc-37252C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

CD9 siRNA (m) is recommended for the inhibition of CD9 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.

GENE EXPRESSION MONITORING

CD9 (C-4): sc-13118 is recommended as a control antibody for monitoring of CD9 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 CD9 gene expression knockdown using RT-PCR Primer: CD9 (m)-PR: sc-37252-PR (20 µl, 437 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.