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# CD69 siRNA (m): sc-42801

## BACKGROUND

CD69 is expressed as a disulfide-linked homodimer called the activation inducer molecule (AIM), which is composed of two differentially glycosylated forms of a single protein. CD69 is among the earliest antigens to appear after activation of T cells, B cells and NK cells. CD69 is expressed constitutively on platelets, CD4<sup>+</sup> or CD8<sup>+</sup> thymocytes and germinal center T cells, but is absent from resting lymphocytes.

## REFERENCES

1. Hamann, J., Fiebig, H. and Strauss, M. 1993. Expression cloning of the early activation antigen CD69, a type II integral membrane protein with a C-type lectin domain. *J. Immunol.* 150: 4920-4927.
2. Lopez-Cabrera, M., Santis, A.G., Fernandez-Ruiz, E., Blacher, R., Esch, F., Sanchez-Mateos, P. and Sanchez-Madrid, F. 1993. Molecular cloning, expression, and chromosomal localization of the human earliest lymphocyte activation antigen AIM/CD69, a new member of the C-type animal lectin superfamily of signal-transmitting receptors. *J. Exp. Med.* 178: 537-547.
3. Ziegler, S.F., Ramsdell, F., Hjerrild, K.A., Armitage, R.J., Grabstein, K.H., Hennen, K.B., Farrah, T., Fanslow, W.C., Shevach, E.M. and Alderson, M.R. 1993. Molecular characterization of the early activation antigen CD69: a type II membrane glycoprotein related to a family of natural killer cell activation antigens. *Eur. J. Immunol.* 23: 1643-1648.
4. Testi, R., D'Ambrosio, D., De Maria, R. and Santoni, A. 1994. The CD69 receptor: a multipurpose cell-surface trigger for hematopoietic cells. *Immunol. Today* 15: 479-483.
5. Vance, B.A., Wu, W., Ribaldo, R.K., Segal, D.M. and Kears, K.P. 1997. Multiple dimeric forms of human CD69 result from differential addition of N-glycans to typical (Asn-X-Ser/Thr) and atypical (Asn-X-Cys) glycosylation motifs. *J. Biol. Chem.* 272: 23117-23122.

## CHROMOSOMAL LOCATION

Genetic locus: CD69 (mouse) mapping to 6 F3.

## PRODUCT

CD69 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD69 shRNA Plasmid (m): sc-42801-SH and CD69 shRNA (m) Lentiviral Particles: sc-42801-V as alternate gene silencing products.

For independent verification of CD69 (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-42801A, sc-42801B and sc-42801C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CD69 siRNA (m) is recommended for the inhibition of CD69 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  $\mu$ M in 66  $\mu$ 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

CD69 (D-3): sc-373799 is recommended as a control antibody for monitoring of CD69 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD69 gene expression knockdown using RT-PCR Primer: CD69 (m)-PR: sc-42801-PR (20  $\mu$ 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.