

# CD9 siRNA (h): sc-35032

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CD9 (human) mapping to 12p13.31.

## PRODUCT

CD9 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD9 shRNA Plasmid (h): sc-35032-SH and CD9 shRNA (h) Lentiviral Particles: sc-35032-V as alternate gene silencing products.

For independent verification of CD9 (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-35032A, sc-35032B and sc-35032C.

## 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

CD9 siRNA (h) is recommended for the inhibition of CD9 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  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## GENE EXPRESSION MONITORING

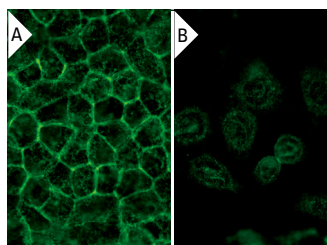
CD9 (C-4): sc-13118 is recommended as a control antibody for monitoring of CD9 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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 CD9 gene expression knockdown using RT-PCR Primer: CD9 (h)-PR: sc-35032-PR (20  $\mu$ l, 416 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## DATA



CD9 siRNA (h): sc-35032. Immunofluorescence staining of methanol-fixed, control HeLa (A) and CD9 siRNA silenced HeLa (B) cells showing diminished nuclear staining in the siRNA silenced cells. Cells probed with CD9 (P1/33/2): sc-20048.

## SELECT PRODUCT CITATIONS

1. Castro-Sanchez, L., et al. 2010. Native type IV collagen induces cell migration through a CD9 and DDR1-dependent pathway in MDA-MB-231 breast cancer cells. *Eur. J. Cell Biol.* 89: 843-852.
2. Huan, J., et al. 2015. Overexpression of CD9 correlates with tumor stage and lymph node metastasis in esophageal squamous cell carcinoma. *Int. J. Clin. Exp. Pathol.* 8: 3054-3061.
3. Viswanathan, K., et al. 2017. Quantitative membrane proteomics reveals a role for tetraspanin enriched microdomains during entry of human cytomegalovirus. *PLoS ONE* 12: e0187899.

## RESEARCH USE

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