SANTA CRUZ BIOTECHNOLOGY, INC.

CD2AP siRNA (h): sc-29984

BACKGROUND

CD2-associated protein (CD2AP) is a cytosolic adaptor molecule that complexes with the intracellular portion of CD2 upon T cell activation. T cell activation induces cell adhesion through CD2-mediated binding to surface ligands on antigen-presenting cells, which enhances antigen-specific T cell activation, potentiates cell clustering and induces cytoskeletal polarization. CD2AP is expressed at highest levels in liver, thymus and spleen. CD2AP contains three SH3 domains that are essential for the interaction with CD2. Mutations in CD2AP that impair this interaction result in the disruption of cell clustering and polarization in activated T lymphocytes. Mice deficient in CD2AP develop a lethal congenital nephrotic syndrome, indicating that CD2AP is also involved in maintaining the integrity of the renal glomerulus.

CHROMOSOMAL LOCATION

Genetic locus: CD2AP (human) mapping to 6p12.3.

PRODUCT

CD2AP 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD2AP shRNA Plasmid (h): sc-29984-SH and CD2AP shRNA (h) Lentiviral Particles: sc-29984-V as alternate gene silencing products.

For independent verification of CD2AP (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-29984A, sc-29984B and sc-29984C.

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

CD2AP siRNA (h) is recommended for the inhibition of CD2AP 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 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

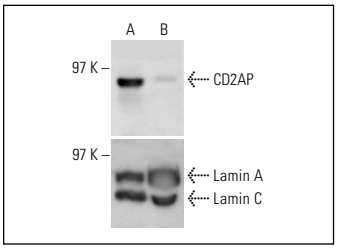
CD2AP (B-4): sc-25272 is recommended as a control antibody for monitoring of CD2AP gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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 CD2AP gene expression knockdown using RT-PCR Primer: CD2AP (h)-PR: sc-29984-PR (20 µl, 449 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



CD2AP siRNA (h): sc-29984. Western blot analysis of CD2AP expression in non-transfected control (**A**) and CD2AP siRNA transfected (**B**) HeLa cells. Blot probed with CD2AP (H-290): sc-9137. Lamin A/C (H-110): sc-20681 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Monzo, P., et al. 2005. Clues to CD2-associated protein involvement in cytokinesis. Mol. Biol. Cell 16: 2891-2902.
2. van Duijn, T.J., et al. 2010. Rac1 recruits the adapter protein CMS/CD2AP to cell-cell contacts. J. Biol. Chem. 285: 20137-20146.

RESEARCH USE

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

PROTOCOLS

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