SANTA CRUZ BIOTECHNOLOGY, INC.

CD229 siRNA (m): sc-44570

BACKGROUND

T lymphocyte surface antigen Ly9 (CD229), also designated lymphocyte antigen 9 or cell-surface molecule Ly9, is a cell surface glycoprotein. CDC229 is a Type I membrane protein that is crucial in adhesion reactions between T lymphocytes and accessory cells (homophilic interaction). It belongs to the CD2 subfamily of the immunoglobulin gene superfamily of proteins (along with CD2, CD48, CD58, CD84, CD244 and CD150). Receptors of this family are important in cytokine production regulation and cytotoxicity of lymphocytes and NK cells. CD229 interacts with the SAP/SH2D1A protein. CD229 is expressed on mature B cells, T cells, thymocytes and NK cells.

REFERENCES

1. Sandrin, M.S., et al. 1992. Isolation and characterization of cDNA clones for mouse Ly9. J. Immunol. 149: 1636-1641.
2. Sandrin, M.S., et al. 1996. Isolation and characterization of cDNA clones for Humly9: the human homologue of mouse Ly9. Immunogenetics 43: 13-19.
3. Tovar, V., et al. 2000. Gene structure of the mouse leukocyte cell surface molecule Ly9. Immunogenetics 51: 788-793.
4. Martin, M., et al. 2005. Identification of GRB2 as a novel binding partner of the signaling lymphocytic activation molecule-associated protein binding receptor CD229. J. Immunol. 174: 5977-5986.
5. Romero, X., et al. 2005. CD229 (Ly9) lymphocyte cell surface receptor interacts homophilically through its N-terminal domain and relocalizes to the immunological synapse. J. Immunol. 174: 7033-7042.
6. SWISS-PROT/TrEMBL (Q9HBG7). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: Ly9 (mouse) mapping to 1 H3.

PRODUCT

CD229 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 CD229 shRNA Plasmid (m): sc-44570-SH and CD229 shRNA (m) Lentiviral Particles: sc-44570-V as alternate gene silencing products.

For independent verification of CD229 (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-44570A, sc-44570B and sc-44570C.

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

CD229 siRNA (m) is recommended for the inhibition of CD229 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

CD229 (Ly9ab3): sc-101621 is recommended as a control antibody for monitoring of CD229 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD229 gene expression knockdown using RT-PCR Primer: CD229 (m)-PR: sc-44570-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Pankova, D., et al. 2019. RASSF1A controls tissue stiffness and cancer stem-like cells in lung adenocarcinoma. EMBO J. 38: e100532.

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.