SANTA CRUZ BIOTECHNOLOGY, INC.

CD84 siRNA (h): sc-42810

BACKGROUND

The human CD84 gene maps to chromosome 1q23.3 and is composed of at least eight exons, with an exon coding for the 5' UTR and the leader peptide, two exons coding for each of the two extracellular Ig-like domains, an exon encoding the hydrophobic transmembrane region and four exons coding for the cytoplasmic domains. The extracellular Ig-like domains share structural and sequence homology with a group of members of the Ig superfamily that include CD2, CD48, CD58 and Ly9. Five CD84 isoforms have been characterized, including CD84a, CD84b, CD84c, CD84d and CD84e, which are preferentially expressed on B lymphocytes, monocytes and platelets, where they act as their own ligand and are therefore costimulatory molecules. The CD84 isoforms are generated by alternative exon enhancement, reading frame shift and use of cryptic splice sites. The differential expression of potential sites of phosphorylation on the different isoforms may be a way to regulate CD84 activity in signal transduction.

REFERENCES

1. de la Fuente, M.A., et al. 1997. CD84 leukocyte antigen is a new member of the Ig superfamily. Blood 90: 2398-2405.
2. Palou, E., et al. 2000. Genomic characterization of CD84 reveals the existence of five isoforms differing in their cytoplasmic domains. Tissue Antigens 55: 118-127.
3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604513. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Martin, M., et al. 2001. CD84 functions as a homophilic adhesion molecule and enhances IFN-γ secretion: adhesion is mediated by Ig-like domain 1. J. Immunol. 167: 3668-3676.
5. LocusLink Report (LocusID: 8832). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: CD84 (human) mapping to 1q23.3.

PRODUCT

CD84 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 CD84 shRNA Plasmid (h): sc-42810-SH and CD84 shRNA (h) Lentiviral Particles: sc-42810-V as alternate gene silencing products.

For independent verification of CD84 (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-42810A, sc-42810B and sc-42810C.

PROTOCOLS

See our web site at 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 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

CD84 siRNA (h) is recommended for the inhibition of CD84 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

CD84 (152-1D5): sc-23899 is recommended as a control antibody for monitoring of CD84 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 CD84 gene expression knockdown using RT-PCR Primer: CD84 (h)-PR: sc-42810-PR (20 µl). 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.