SANTA CRUZ BIOTECHNOLOGY, INC.

CCRL2 siRNA (h): sc-77982

BACKGROUND

CCRL2 (C-C chemokine receptor-like 2), also known as chemokine receptor X, human chemokine receptor (HCR), CRAM-A or CRAM-B, is a seven pass transmembrane protein expressed by monocytes, neutrophils, and dendritic cells of immunal tissues (predominanly spleen, fetal liver, bone marrow and lymph node). It shares over 40% homology with other C-C chemokine receptors but does not share the conserved DRY motif which is among the important motifs necessary for signalling and ligand-binding. C-C chemokine receptors are G protein-coupled, seven pass transmembrane domain proteins whose major physiological role is to function in the chemotaxis of T cells and phagocytic cells to areas of inflammation. CCRL2 responds to inflammatory chemokines and is upregulated in cells stimulated with lipopolysaccharide (LPS). It may function as a receptor for CCL2, CCL5, CCL7 and CCL8. In addition, CCRL2 may be involved in the pathogenesis of rheumatoid arthritis (RA).

REFERENCES

1. Fan, P., et al. 1998. Cloning and characterization of a novel human chemokine receptor. Biochem. Biophys. Res. Commun. 243: 264-268.
2. Margulies, B.J., et al. 2001. Identification and comparison of eleven rhesus macaque chemokine receptors. AIDS Res. Hum. Retroviruses 17: 981-986.
3. Migeotte, I., et al. 2002. Distribution and regulation of expression of the putative human chemokine receptor HCR in leukocyte populations. Eur. J. Immunol. 32: 494-501.
4. Biber, K., et al. 2003. Expression of L-CCR in HEK 293 cells reveals functional responses to CCL2, CCL5, CCL7, and CCL8. J. Leukoc. Biol. 74: 243-251.
5. Galligan, C.L., et al. 2004. Up-regulated expression and activation of the. 2004. Up-regulated expression and activation of the orphan chemokine receptor, CCRL2, in rheumatoid arthritis. Arthritis Rheum. 50: 1806-1814.
6. Sozzani, S. 2005. Dendritic cell trafficking: more than just chemokines. Cytokine Growth Factor Rev. 16: 581-592.
7. Locati, M., et al. 2005. Silent chemoattractant receptors: D6 as a decoy and scavenger receptor for inflammatory CC chemokines. Cytokine Growth Factor Rev. 16: 679-686.
8. Thio, C.L., et al. 2006. Genetic protection against hepatitis B virus conferred by CCR5δ32: evidence that CCR5 contributes to viral persistence. J. Virol. 81: 441-445.
9. Mantovani, A., et al. 2006. Tuning inflammation and immunity by chemokine sequestration: decoys and more. Nat. Rev. Immunol. 6: 907-918.

CHROMOSOMAL LOCATION

Genetic locus: CCRL2 (human) mapping to 3p21.31.

PRODUCT

CCRL2 siRNA (h) is a target-specific 19-25 nt siRNA 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 CCRL2 shRNA Plasmid (h): sc-77982-SH and CCRL2 shRNA (h) Lentiviral Particles: sc-77982-V as alternate gene silencing 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

CCRL2 siRNA (h) is recommended for the inhibition of CCRL2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CCRL2 gene expression knockdown using RT-PCR Primer: CCRL2 (h)-PR: sc-77982-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. Catusse, J., et al. 2010. Role of the atypical chemoattractant receptor CRAM in regulating CCL19 induced CCR7 responses in B-cell chronic lymphocytic leukemia. Mol. Cancer 9: 297.
2. Yin, F., et al. 2012. Elevated chemokine CC-motif receptor-like 2 (CCRL2) promotes cell migration and invasion in glioblastoma. Biochem. Biophys. Res. Commun. 429: 168-172.

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.