

CD200R4 siRNA (m): sc-142184

BACKGROUND

CD200R4 (cell surface glycoprotein CD200 receptor 4), also known as CD200RLa (CD200 cell surface glycoprotein receptor-like a), is a 270 amino acid single-pass type I membrane protein that belongs to the CD200R family and contains one Ig-like C2-type domain and one Ig-like V-type domain. CD200R4 is highly expressed in monocytes, NK cells and a subset of NKT cells, but weakly expressed in granulocytes and B-cells. CD200R4 is generally expressed in brain, lung, testis, thymus, intestine, uterus and bone marrow derived-macrophage and dendritic cells and mast cells. It is suggested that CD200R4 is involved in the recruitment or surface expression of the TYROBP receptor. The CD200R4 gene is located on mouse chromosome 16 B4 and is conserved in human, chimpanzee, Rhesus monkey, and rat.

REFERENCES

1. Wright, G.J., Cherwinski, H., Foster-Cuevas, M., Brooke, G., Puklavec, M.J., Bigler, M., Song, Y., Jenmalm, M., Gorman, D., McClanahan, T., Liu, M.R., Brown, M.H., Sedgwick, J.D., Phillips, J.H. and Barclay, A.N. 2003. Characterization of the CD200 receptor family in mice and humans and their interactions with CD200. *J. Immunol.* 171: 3034-3046.
2. Gorczynski, R.M., Chen, Z., Clark, D.A., Kai, Y., Lee, L., Nachman, J., Wong, S. and Marsden, P. 2004. Structural and functional heterogeneity in the CD200R family of immunoregulatory molecules and their expression at the fetomaternal interface. *Am. J. Reprod. Immunol.* 52: 147-163.
3. Voehringer, D., Rosen, D.B., Lanier, L.L. and Locksley, R.M. 2004. CD200 receptor family members represent novel DAP12-associated activating receptors on basophils and mast cells. *J. Biol. Chem.* 279: 54117-54123.
4. Gorczynski, R., Chen, Z., Kai, Y., Lee, L., Wong, S. and Marsden, P.A. 2004. CD200 is a ligand for all members of the CD200R family of immunoregulatory molecules. *J. Immunol.* 172: 7744-7749.
5. Katayama, S., Tomaru, Y., Kasukawa, T., Waki, K., Nakanishi, M., Nakamura, M., Nishida, H., Yap, C.C., Suzuki, M., Kawai, J., Suzuki, H., Carninci, P., Hayashizaki, Y., Wells, C., Frith, M., Ravasi, T., et al. 2005. Antisense transcription in the mammalian transcriptome. *Science* 309: 1564-1566.
6. Skarnes, W.C., Rosen, B., West, A.P., Koutsourakis, M., Bushell, W., Iyer, V., Mujica, A.O., Thomas, M., Harrow, J., Cox, T., Jackson, D., Severin, J., Biggs, P., Fu, J., Nefedov, M., de Jong, P.J., Stewart, A.F. and Bradley, A. 2011. A conditional knockout resource for the genome-wide study of mouse gene function. *Nature* 474: 337-342.

CHROMOSOMAL LOCATION

Genetic locus: Cd200r4 (mouse) mapping to 16 B4.

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.

PRODUCT

CD200R4 siRNA (m) is a pool of 2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD200R4 shRNA Plasmid (m): sc-142184-SH and CD200R4 shRNA (m) Lentiviral Particles: sc-142184-V as alternate gene silencing products.

For independent verification of CD200R4 (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-142184A and sc-142184B.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CD200R4 siRNA (m) is recommended for the inhibition of CD200R4 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 μ M in 66 μ 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD200R4 gene expression knockdown using RT-PCR Primer: CD200R4 (m)-PR: sc-142184-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.