

# CD200R3 siRNA (m): sc-142183

## BACKGROUND

CD200R3 (CD200 receptor 3), also known as Cd200rlb (CD200 cell surface glycoprotein receptor-like b), is a 296 amino acid single-pass type I membrane protein belonging to the CD200R family and contains an Ig-like C2-type (immunoglobulin-like) domain and an Ig-like V-type (immunoglobulin-like) domain. CD200R3 is expressed in uterus, spleen, bone marrow-derived dendritic, basophil and mast cells, and weakly expressed in brain, testis, lung and thymus. It is suggested that CD200R3 may regulate IgE-independent immune responses by acting as an activating receptor on mast cells and basophils. CD200R3 exists as nine alternatively spliced isoforms and is encoded by gene located on mouse chromosome 16 B4.

## 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 feto-maternal 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. Hatherley, D., Cherwinski, H.M., Moshref, M. and Barclay, A.N. 2005. Recombinant CD200 protein does not bind activating proteins closely related to CD200 receptor. *J. Immunol.* 175: 2469-2474.
6. Kojima, T., Obata, K., Mukai, K., Sato, S., Takai, T., Minegishi, Y. and Karasuyama, H. 2007. Mast cells and basophils are selectively activated *in vitro* and *in vivo* through CD200R3 in an IgE-independent manner. *J. Immunol.* 179: 7093-7100.

## CHROMOSOMAL LOCATION

Genetic locus: Cd200r3 (mouse) mapping to 16 B4.

## PRODUCT

CD200R3 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD200R3 shRNA Plasmid (m): sc-142183-SH and CD200R3 shRNA (m) Lentiviral Particles: sc-142183-V as alternate gene silencing products.

For independent verification of CD200R3 (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-142183A, sc-142183B and sc-142183C.

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

## APPLICATIONS

CD200R3 siRNA (m) is recommended for the inhibition of CD200R3 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  $\mu$ M in 66  $\mu$ 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 CD200R3 gene expression knockdown using RT-PCR Primer: CD200R3 (m)-PR: sc-142183-PR (20  $\mu$ l). 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.