

# CD160 siRNA (h): sc-72824

## BACKGROUND

CD160, also known as NK1, BY55 or NK28, is a 181 amino acid lipid-anchored cell membrane glycoprotein that contains one immunoglobulin-like domain. Expressed in small intestine, spleen and functional NK (natural killer) and T cytotoxic lymphocytes, CD160 exists as a disulfide-linked homomultimer that functions as a receptor for MHC (major histocompatibility complex) molecules and is thought to regulate the function of NK cells. Additionally, CD160 interacts with HVEM (herpesvirus entry mediator) and, via this interaction, is able to negatively regulate CD4<sup>+</sup> T cell activation, indicating a role in immune system regulation. Multiple isoforms of CD160 exist due to alternative splicing events. The gene encoding CD160 maps to human chromosome 1q21.1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

## REFERENCES

1. Maïza, H., et al. 1993. A novel 80-kD cell surface structure identifies human circulating lymphocytes with natural killer activity. *J. Exp. Med.* 178: 1121-1126.
2. Bensussan, A., et al. 1994. BY55 monoclonal antibody delineates within human cord blood and bone marrow lymphocytes distinct cell subsets mediating cytotoxic activity. *Proc. Natl. Acad. Sci. USA* 91: 9136-9140.
3. Anumanthan, A., et al. 1998. Cloning of BY55, a novel Ig superfamily member expressed on NK cells, CTL, and intestinal intraepithelial lymphocytes. *J. Immunol.* 161: 2780-2790.
4. Agrawal, S., et al. 1999. Cutting edge: MHC class I triggering by a novel cell surface ligand costimulates proliferation of activated human T cells. *J. Immunol.* 162: 1223-1226.
5. Nikolova, M., et al. 2002. BY55/CD160 acts as a co-receptor in TCR signal transduction of a human circulating cytotoxic effector T lymphocyte subset lacking CD28 expression. *Int. Immunol.* 14: 445-451.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 604463. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: CD160 (human) mapping to 1q21.1.

## PRODUCT

CD160 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD160 shRNA Plasmid (h): sc-72824-SH and CD160 shRNA (h) Lentiviral Particles: sc-72824-V as alternate gene silencing products.

For independent verification of CD160 (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-72824A, sc-72824B and sc-72824C.

## 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

CD160 siRNA (h) is recommended for the inhibition of CD160 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  $\mu$ 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 CD160 gene expression knockdown using RT-PCR Primer: CD160 (h)-PR: sc-72824-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.