SANTA CRUZ BIOTECHNOLOGY, INC.

KIR3DL1 siRNA (m): sc-146487

BACKGROUND

The killer immunoglobulin-like receptors (KIRs) on natural killer (NK) cells regulate the inhibition and activation of NK-cell responses through recognition of human leukocyte antigen (HLA) class I molecules. KIR3DL1, a receptor for HLA-B antigens with the Bw4 allele, transmits an inhibitory signal to prevent killer cell-mediated cytoxicity. KIR3DL1 encodes a 444 amino acid type I transmembrane protein, containing three immunoglobulin-like C2-type domains. Human KIR3DL1 maps to chromosome 19q13.4.

REFERENCES

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2. Wende, H., et al. 1999. Organization of the leukocyte receptor cluster (LRC) on human chromosome 19q13.4. Mamm. Genome 10: 154-160.
3. Kwon, D., et al. 2000. Diversity of the p70 killer cell inhibitory receptor (KIR3DL) family members in a single individual. Mol. Cells 1: 54-60.
4. Martin, M.P., et al. 2002. Epistatic interaction between KIR3DS1 and HLA-B delays the progression to AIDS. Nat. Genet. 4: 429-434.
5. López-Vázquez, A., et al. 2005. Interaction between KIR3DL1 and HLA-B*57 supertype alleles influences the progression of HIV-1 infection in a Zambian population. Hum. Immunol. 66: 285-289.
6. Lopez-Larrea, C., et al. 2006. Contribution of KIR3DL1/3DS1 to ankylosing spondylitis in human leukocyte antigen-B27 Caucasian populations. Arthritis Res. Ther. 8: R101.
7. Thananchai, H., et al. 2007. Cutting edge: allele-specific and peptide-dependent interactions between KIR3DL1 and HLA-A and HLA-B. J. Immunol. 178: 33-37.
8. O'Connor, G.M., et al. 2007. Functional polymorphism of the KIR3DL1/S1 receptor on human NK cells. J. Immunol. 178: 235-241.
9. Martin, M.P., et al. 2007. Innate partnership of HLA-B and KIR3DL1 subtypes against HIV-1. Nat. Genet. 39: 733-740.

CHROMOSOMAL LOCATION

Genetic locus: Kir3dl1 (mouse) mapping to X F1.

PRODUCT

KIR3DL1 siRNA (m) 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 KIR3DL1 shRNA Plasmid (m): sc-146487-SH and KIR3DL1 shRNA (m) Lentiviral Particles: sc-146487-V as alternate gene silencing products.

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

KIR3DL1 siRNA (m) is recommended for the inhibition of KIR3DL1 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 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

KIR3DL1/2 (C-3): sc-515229 is recommended as a control antibody for monitoring of KIR3DL1 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 KIR3DL1 gene expression knockdown using RT-PCR Primer: KIR3DL1 (m)-PR: sc-146487-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.