SANTA CRUZ BIOTECHNOLOGY, INC.

Blr1 siRNA (m): sc-29813

BACKGROUND

Burkitt's lymphoma receptor 1 (Blr1) is a lymphocyte specific chemokine receptor expressed at low levels in secondary lymphoid tissues and in defined structures of the cerebellum. The G protein-coupled receptor has significant homology to other chemokine receptors. Stimulation of Blr1 by its ligand, B-lymphocyte chemo-attractant (BLC) results in an influx of calcium into the cell and the chemotaxis of the cell. Blr1 is required for B-cell migration into splenic and Peyer's patch follicles. BLC expression in Peyer's patches is highest in germinal centers, where B cells undergo somatic mutation and affinity maturation.

REFERENCES

1. MacLennan, I.C. 1994. Germinal centers. Annu. Rev. Immunol. 12: 117-139.
2. Forster, R., et al. 1996. A putative chemokine receptor, Blr1, directs B cell migration to define lymphoid organs and specific anatomic compartments of the spleen. Cell 87: 1037-1047.
3. Imal, Y. and Yamakawa, M. 1996. Morphology, function and pathology of follicular dendritic cells. Pathol. Int. 46: 807-833.
4. Flynn, S., et al. 1998. CD4 T cell cytokine differentiation: the B cell activation molecule, OX40 ligand, instructs CD4 T cells to express interleukin 4 and upregulates expression of the chemokine receptor, Blr1. J. Exp. Med. 188: 297-304.
5. Gunn, M.D., et al. 1998. A B-cell-homing chemokine made in lymphoid follicles activates Burkitt's lymphoma receptor-1. Nature 391: 799-803.
6. Battle, T.E., et al. 2000. Retinoic acid-induced Blr1 expression promotes ERK2 activation and cell differentiation in HL-60 cells. Exp. Cell Res. 254: 287-298.
7. Battle, T.E., et al. 2001. Retinoic acid-induced Blr1 expression requires RARα, RXR, and MAPK activation and uses ERK2 but not JNK/SAPK to accelerate cell differentiation. Eur. J. Cell Biol. 80: 59-67.
8. Wang, J. and Yen, A. 2004. A novel retinoic acid-responsive element regulates retinoic acid-induced Blr1 expression. Mol. Cell. Biol. 24: 2423-2343.

CHROMOSOMAL LOCATION

Genetic locus: Cxcr5 (mouse) mapping to 9 A5.2.

PRODUCT

Blr1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Blr1 shRNA Plasmid (m): sc-29813-SH and Blr1 shRNA (m) Lentiviral Particles: sc-29813-V as alternate gene silencing products.

For independent verification of Blr1 (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-29813A, sc-29813B and sc-29813C.

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

Blr1 siRNA (m) is recommended for the inhibition of Blr1 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

Blr1 (C-3): sc-373775 is recommended as a control antibody for monitoring of Blr1 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 Blr1 gene expression knockdown using RT-PCR Primer: Blr1 (m)-PR: sc-29813-PR (20 µl, 472 bp). 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 for detailed protocols and support products.