SANTA CRUZ BIOTECHNOLOGY, INC.

CD79B siRNA (m): sc-42807

BACKGROUND

CD79 (also designated Ig α/Ig β) is a heterodimer composed of α chains, designated CD79A or MB-1, and β chains, designated CD79B or B29. The B cell antigen receptor complex (Bcr) is formed by the association of CD79 with a membrane immunoglobulin, such as IgM or IgD. The membrane immunoglobulins IgM and IgD achieve surface expression and antigen presentation function in response to CD79 association. The cytoplasmic tails of both CD79A and CD79B contain an ITAM (immunoreceptor tyrosine-based activation) motif, which acts to initiate the Bcr signaling reactions by binding to and activating tyrosine kinases.

REFERENCES

1. Poppema, S., et al. 1987. Monoclonal antibodies (MT1, MT2, MB-1, MB-2, MB-3) reactive with leukocyte subsets in paraffin-embedded tissue sections. Am. J. Pathol. 127: 418-429.
2. van Noesel, C.J., et al. 1991. The membrane IgM-associated heterodimer on human B cells is a newly defined B cell antigen that contains the protein product of the MB-1 gene. J. Immunol. 146: 3881-3888.
3. Mason, D.Y., et al. 1991. The IgM-associated protein MB-1 as a marker of normal and neoplastic B cells. J. Immunol. 147: 2474-2482.
4. Ha, H.J., et al. 1992. Molecular cloning and expression pattern of a human gene homologous to the murine MB-1 gene. J. Immunol. 148: 1526-1531.
5. Mason, D.Y., et al. 1992. The B29 and MB-1 polypeptides are differentially expressed during human B cell differentiation. Eur. J. Immunol. 22: 2753-2756.
6. Jones, M., et al. 1993. Detection of T and B cells in many animal species using cross-reactive anti-peptide antibodies. J. Immunol. 150: 5429-5435.
7. Wood, W.J., Jr., et al. 1993. Isolation and chromosomal mapping of the human immunoglobulin-associated B29 gene (IGB). Genomics 16: 187-192.
8. Mason, D.Y., et al. 1995. CD79A: a novel marker for B-cell neoplasms in routinely processed tissue samples. Blood 86: 1453-1459.
9. Macardle, P.J., et al. 1997. The antigen receptor complex on cord B lymphocytes. Immunology 90: 376-382.

CHROMOSOMAL LOCATION

Genetic locus: Cd79b (mouse) mapping to 11 E1.

PRODUCT

CD79B 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 CD79B shRNA Plasmid (m): sc-42807-SH and CD79B shRNA (m) Lentiviral Particles: sc-42807-V as alternate gene silencing products.

For independent verification of CD79B (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-42807A, sc-42807B and sc-42807C.

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

CD79B siRNA (m) is recommended for the inhibition of CD79B 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

CD79B (B29/123): sc-53210 is recommended as a control antibody for monitoring of CD79B 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-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (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 CD79B gene expression knockdown using RT-PCR Primer: CD79B (m)-PR: sc-42807-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.