SANTA CRUZ BIOTECHNOLOGY, INC.

VpreB3 siRNA (h): sc-63214

BACKGROUND

VpreB (also known as CD179a or pre-B lymphocyte 1) is expressed in pre-B lymphocytes, but not in mature B cells or in other blood cell lineages. The gene which encodes VpreB maps to human chromosome 22q11.23. The VpreB and λ 5 genes encode the ι and ω polypeptide chains, respectively, which associate with the Ig-μ chain to form a molecular complex that is expressed on the surface of pre-B cells. This complex presumably regulates Ig gene rearrangements in the early steps of B cell differentiation. In the mouse the two genes are simultaneously expressed in pre-B cells and belong to the same transcription unit. A primary transcript is synthesized from which the pre-B and λ 5 mRNAs are derived by alternative splicing. In the human, however, the two genes are separate and do not belong to the same transcription unit.

REFERENCES

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3. Pillai, S. and Baltimore, D. 1988. The ω and ι surrogate immunoglobulin light chains. Curr. Top. Microbiol. Immunol. 137: 136-139.
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CHROMOSOMAL LOCATION

Genetic locus: VPREB3 (human) mapping to 22q11.23.

PRODUCT

VpreB3 siRNA (h) is a pool of 2 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 VpreB3 shRNA Plasmid (h): sc-63214-SH and VpreB3 shRNA (h) Lentiviral Particles: sc-63214-V as alternate gene silencing products.

For independent verification of VpreB3 (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-63214A and sc-63214B.

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

VpreB3 siRNA (h) is recommended for the inhibition of VpreB3 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 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

VpreB3 (FT-32): sc-135605 is recommended as a control antibody for monitoring of VpreB3 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 VpreB3 gene expression knockdown using RT-PCR Primer: VpreB3 (h)-PR: sc-63214-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.