SANTA CRUZ BIOTECHNOLOGY, INC.

VpreB (F-14): sc-25010

BACKGROUND

VpreB (also known as CD179a or pre-B-lymhocyte 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 22q11.2. The VpreB and lambda-5 genes encode the iota and omega polypeptide chains, respectively, which associate with the Ig-mu 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 2 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 lambda-5 mRNAs are derived by alternative splicing. In the human, however, the 2 genes are separate and do not belong to the same transcription unit.

REFERENCES

1. Kudo, A. and Melchers, F. 1987. A second gene, Vpre-B in the lambda 5 locus of the mouse, which appears to be selectively expressed in pre-B lymphocytes. EMBO J. 6: 2267-2272.
2. Bauer, S.R., Huebner, K., Budarf, M., Finan, J., Erikson, J., Emanuel, B.S., Nowell, P.C., Croce, C.M., and Melchers, F. 1988. The human V(pre)B gene is located on chromosome 22 near a cluster of V (lambda-1) gene segments. Immunogenetics 28: 328-333.
3. Pillai, S. and Baltimore, D. 1988. The omega and iota surrogate immunoglobulin light chains. Curr. Top. Microbiol. Immun. 137: 136-139.
4. Mattei, M.-G., Fumoux, F., Roeckel, N., Fougereau, M., and Schiff, C. 1991. The human pre-B-specific lambda-like cluster is located in the 22q11.2-22q12.3 region, distal to the IgC-lambda locus. Genomics. 9: 544-546.
5. Licence, S., Persson, C., Mundt, C., and Martensson, I.L. 2003. The VpreB1 enhancer drives developmental stage-specific gene expression *in vivo*. Eur. J. Immunol. 33: 1117-1126.

SOURCE

VpreB (F-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VpreB of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25010 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

VpreB (F-14) is recommended for detection of VpreB of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VpreB siRNA (h): sc-44629.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.