



## VpreB (MB2): sc-52363

### 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 22q11.2. 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 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 Lambda 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

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.

### CHROMOSOMAL LOCATION

Genetic locus: VPREB1 (human) mapping to 22q11.2; Vpreb1 (mouse) mapping to 16 A2.

### SOURCE

VpreB (MB2) is a mouse monoclonal antibody raised against lymphocytes of human origin.

### PRODUCT

Each vial contains 500  $\mu$ l culture supernatant containing IgG<sub>1</sub> with < 0.1% sodium azide.

### STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

### APPLICATIONS

VpreB (MB2) is recommended for detection of VpreB of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

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 goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immuno-histochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.