

VpreB3 (H-45): sc-292525

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 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

1. Kudo, A. and Melchers, F. 1987. A second gene, VpreB in the λ 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 VpreB gene is located on chromosome 22 near a cluster of V λ gene segments. *Immunogenetics* 28: 328-333.
3. Pillai, S. and Baltimore, D. 1988. The ω and ι surrogate immunoglobulin light chains. *Curr. Top. Microbiol. Immunol.* 137: 136-139.
4. Mattei, M.G., Fumoux, F., Roeckel, N., Fougereau, M. and Schiff, C. 1991. The human pre-B-specific λ -like cluster is located in the 22q11.2-22q12.3 region, distal to the IgC- λ locus. *Genomics* 9: 544-546.
5. Seidl, T., Rolink, A. and Melchers, F. 2001. The VpreB protein of the surrogate light-chain can pair with some μ heavy-chains in the absence of the λ 5 protein. *Eur. J. Immunol.* 31: 1999-2006.
6. Stephan, R.P., Elgavish, E., Karasuyama, H., Kubagawa, H. and Cooper, M.D. 2001. Analysis of VpreB expression during B lineage differentiation in λ 5-deficient mice. *J. Immunol.* 167: 3734-3739.
7. 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.
8. Cannon, J.P., Haire, R.N., Pancer, Z., Mueller, M.G., Skapura, D., Cooper, M.D. and Litman, G.W. 2005. Variable domains and a VpreB-like molecule are present in a jawless vertebrate. *Immunogenetics* 56: 924-929.

CHROMOSOMAL LOCATION

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

SOURCE

VpreB3 (H-45) is a rabbit polyclonal antibody raised against amino acids 23-67 mapping within an internal region of VpreB3 of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

VpreB3 (H-45) is recommended for detection of VpreB3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 VpreB3 siRNA (h): sc-63214, VpreB3 shRNA Plasmid (h): sc-63214-SH and VpreB3 shRNA (h) Lentiviral Particles: sc-63214-V.

Molecular Weight of VpreB3: 16 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.