

# VpreB3 (Y-16): sc-65205

## 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

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3. Pillai, S. and Baltimore, D. 1988. The  $\omega$  and  $\iota$  surrogate immunoglobulin light chains. *Curr. Top. Microbiol. Immunol.* 137: 136-139.
4. Mattei, M.G., et al. 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. Seidl, T., et al. 2001. The VpreB protein of the surrogate light-chain can pair with some  $\mu$  heavy-chains in the absence of the Lambda 5 protein. *Eur. J. Immunol.* 31: 1999-2006.
6. Stephan, R.P., et al. 2001. Analysis of VpreB expression during B lineage differentiation in Lambda 5-deficient mice. *J. Immunol.* 167: 3734-3739.
7. Licence, S., et al. 2003. The VpreB1 enhancer drives developmental stage-specific gene expression *in vivo*. *Eur. J. Immunol.* 33: 1117-1126.
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## CHROMOSOMAL LOCATION

Genetic locus: VPRED3 (human) mapping to 22q11.23.

## SOURCE

VpreB3 (Y-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VpreB3 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-65205 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

VpreB3 (Y-16) 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  $\mu$ g per 100-500  $\mu$ 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).

VpreB3 (Y-16) is also recommended for detection of VpreB3 in additional species, including porcine.

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.

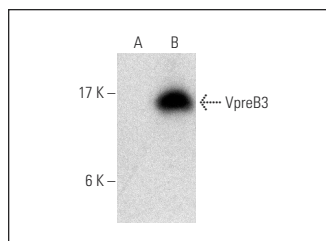
Molecular Weight of VpreB3: 16 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or VpreB3 (h2): 293T Lysate: sc-158090.

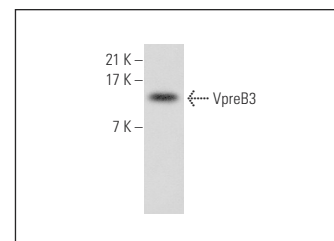
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



VpreB3 (Y-16): sc-65205. Western blot analysis of VpreB3 expression in non-transfected: sc-117752 (A) and human VpreB3 transfected: sc-158090 (B) 293T whole cell lysates.



VpreB3 (Y-16): sc-65205. Western blot analysis of VpreB3 expression in Ramos whole cell lysate.

## STORAGE

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

## RESEARCH USE

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