

# Lambda 5 (V-20): sc-28107

## BACKGROUND

Lambda 5 (also called immunoglobulin lambda-like polypeptide 1 or CD179b antigen) and VpreB comprise the surrogate light chain of the pre-B cell receptor complex. SL chain is also part of a quality control mechanism that tests a  $\mu$ -chain for its ability to pair with conventional L chains. It can form Ig-like complexes with the heavy (H) chain, the DHJHC  $\mu$ -protein or the p55 chain. Production of the surrogate light chain begins at the stage of pro-B cells, continues during the pre-B cell stage and halts at the immature B cell stage. Once pre-BCR is expressed, SL chain expression is turned off. As pre-B II cells proliferate, SL is diluted out, thus limiting pre-BCR formation. Lambda 5 is critical for B cell development in mammals. Expression of Lambda 5 is highest in liver, pre-B lymphocytes and bone marrow, the major source of B cell precursors.

## REFERENCES

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- Mai, S., et al. 1995. The c-Myc protein represses the Lambda 5 and TdT initiators. *Nucleic Acids Res.* 23: 1-9.
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- Minegishi, Y., et al. 1998. Mutations in the human Lambda 5/14.1 gene result in B cell deficiency and agammaglobulinemia. *J. Exp. Med.* 187: 71-77.
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- Bradl, H., et al. 2003. Interaction of murine precursor B cell receptor with stroma cells is controlled by the unique tail of Lambda 5 and stroma cell-associated heparan sulfate. *J. Immunol.* 171: 2338-2348.
- Schuh, W., et al. 2003. Cutting edge: signaling and cell surface expression of a  $\mu$ H chain in the absence of Lambda 5: a paradigm revisited. *J. Immunol.* 171: 3343-3347.

## CHROMOSOMAL LOCATION

Genetic locus: Igll1 (mouse) mapping to 16 A3.

## SOURCE

Lambda 5 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Lambda 5 of mouse origin.

## RESEARCH USE

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

## 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-28107 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Lambda 5 (V-20) is recommended for detection of Lambda 5 of mouse and rat 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).

Suitable for use as control antibody for Lambda 5 siRNA (m): sc-44544, Lambda 5 shRNA Plasmid (m): sc-44544-SH and Lambda 5 shRNA (m) Lentiviral Particles: sc-44544-V.

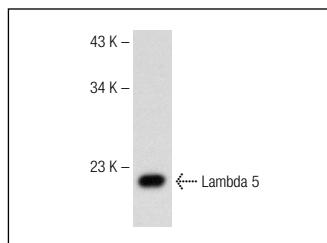
Molecular Weight of Lambda 5: 22 kDa.

Positive Controls: NFS-25 whole cell lysate or mouse spleen extract: sc-2391.

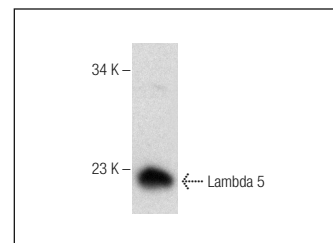
## RECOMMENDED SECONDARY REAGENTS

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



Lambda 5 (V-20): sc-28107. Western blot analysis of Lambda 5 expression in NFS-25 whole cell lysate.



Lambda 5 (V-20): sc-28107. Western blot analysis of Lambda 5 expression in mouse spleen tissue extract.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.