# Lambda 5 (h): 293T Lysate: sc-113775



The Power to Question

## **BACKGROUND**

Lambda 5 (also called immunoglobulin lambda-like polypeptide 1 or CD179b antigen) and VpreB comprise the surrogate light (SL) 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 lg-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**

- 1. Hollis, G., et al. 1989. Immunoglobulin  $\lambda$  light-chain-related genes 14.1 and 16.1 are expressed in pre-B cells and may encode the human immunoglobulin  $\omega$  light-chain protein. Proc. Natl. Acad. Sci. USA 86: 5552-5556.
- 2. Bossy, D., et al. 1991. Organization and expression of the  $\lambda$ -like genes that contribute to the  $\mu$ - $\psi$  light chain complex in human pre-B cells. Int. Immunol. 11: 1081-1090.
- 3. Mai, S., et al. 1995. The c-Myc protein represses the Lambda 5 and TdT initiators. Nucleic Acids Res. 23: 1-9.
- Corcos, D., et al. 1995. Pre-B cell development in the absence of Lambda 5 in transgenic mice expressing a heavy chain disease protein. Curr. Biol. 5: 1140-1148.
- 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.
- Donohoe, M.E., et al. 2000. Transgenic human Lambda 5 rescues the murine Lambda 5 nullizygous phenotype. J. Immunol. 164: 5269-5276.
- 7. 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.
- 8. 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.

# CHROMOSOMAL LOCATION

Genetic locus: IGLL1 (human) mapping to 22q11.23.

#### **PRODUCT**

Lambda 5 (h): 293T Lysate represents a lysate of human Lambda 5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

# **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## **APPLICATIONS**

Lambda 5 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Lambda 5 antibodies. Recommended use: 10-20  $\mu$ l per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

## **RESEARCH USE**

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

## **PROTOCOLS**

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

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