# RT1-Bα (53-5D2): sc-52722



The Power to Question

### **BACKGROUND**

RT1 is the the major histocompatibility complex (MHC) in the rat which contains genes that code for two class II histocompatibility antigens. RT1-B is an antigen of the RT1 complex. It is a protein dimer consisting of an  $\alpha$  and  $\beta$  glycoprotein chain and is homologous to I-A and I-E genes, respectively, in the H-2 complex of the mouse. MHC Class II antigens are useful in studying T helper cell interaction with class II positive antigen presenting cells (dendritic cells, B cells, macrophages) and offer new possibilities for studying the development of T helper cells since these antibodies also stain stromal cells in the thymus.

# **REFERENCES**

- 1. Barran, P.A. and McMaster, W.R. 1987. DNA sequence analysis of the rat RT1-B $\alpha$  gene. Immunogenetics 26: 56-62.
- Male, D.K., Pryce, G. and Butcher, G.W. 1988. Serological evidence for a defect in RT1-B (I-A) expression by the BDIX rat strain. J. Immunogenet. 14: 301-312.
- 3. Henkes, W. and Reske, K. 1989. Translation in *Xenopus laevis* oocytes of hybrid selected LEW rat RT1-B  $\alpha$  and  $\beta$  chain transcripts results in serologically discrete class II polypeptide chain complexes. Mol. Immunol. 26: 171-179.
- 4. Syha, J., Henkes, W. and Reske, K. 1989. Complete cDNA sequence coding for the MHC class II RT1-B $\alpha$  chain of the Lewis rat. Nucleic Acids Res. 17: 3985.
- Wedekind, D. and Hedrich, H.J. 1999. Characterization of RT1-B alleles from serologically identical and different RT1-B/D haplotypes. Transplant. Proc. 31: 1522.
- Buenafe, A.C., Tsu, R.C., McMahan, R., Bebo, B.F., Vandenbark, A.A. and Offner, H. 2001. Rat RT1-B-transfected fibroblast lines process and present myelin antigens and activate T cells to induce experimental autoimmune encephalomyelitis. J. Neuroimmunol. 112: 106-114.
- 7. Dressel, R., Walter, L. and Günther, E. 2002. Genomic and funtional aspects of the rat MHC, the RT1 complex. Immunol. Rev. 184: 82-95.
- 8. Jimɛnez, B.D., Maldonado, L., Dahl, R.H., Quattrochi, L.C. and Guzelian, P.S. 2002. Ectopic expression of MHC class II genes (RT1-B(I)  $\beta/\alpha$ ) in rat *in vivo* and in culture can be elicited by treatment with the pregnane X 16  $\alpha$ -carbonitrile and dexamethasone. Life Sci. 71: 311-323.
- 9. Ettinger, R.A., Moustakas, A.K. and Lobaton, S.D. 2004. Open reading frame sequencing and structure-based alignment of polypeptides encoded by RT1-B $\beta$ , RT1-B $\alpha$ , RT1-D $\beta$  and RT1-D $\alpha$  alleles. Immunogenetics 56: 585-596.

# **SOURCE**

RT1-B $\alpha$  (53-5D2) is a mouse monoclonal antibody raised against bone marrow cells of rat origin.

# **PRODUCT**

Each vial contains 100  $\mu g\ lgG_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### **APPLICATIONS**

RT1-B $\alpha$  (53-5D2) is recommended for detection of RT1-B $\alpha$  of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of RT1-Bα: 29 kDa.

# **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.

# **PROTOCOLS**

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com