



RT1-B β (1.B.567): sc-71977

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 α and β 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

- Holowachuk, E.W., Greer, M.K. and Martin, D.R. 1988. Elevated mRNA levels of major histocompatibility complex class II genes in lymphocytes of autoimmune BB rats. *Diabetes* 37: 1637-1640.
- Mizuno, K., Inomata, T., Tsuchimoto, S., Matsuno, Y., Niiyama, T., Fujii, H., Natori, T. and Aizawa, M. 1988. Ir gene for bovine Insulin in the rat maps to RT1-B β . *J. Immunogenet.* 14: 159-162.
- Fujii, H., Kakinuma, M., Yoshiki, T. and Natori, T. 1991. Polymorphism of the class II gene of rat major histocompatibility complex, RT1: partial sequence comparison of the first domain of the RT1-B β 1 alleles. *Immunogenetics* 33: 399-403.
- Syha-Jedelhauser, J., Wendling, U. and Reske, K. 1991. Complete coding nucleotide sequence of cDNA for the class II RT1-B β I chain of the Lewis rat. *Biochim. Biophys. Acta* 1089: 414-416.
- Easterfield, A.J., Bradley, J.A. and Bolton, E.M. 2003. Complementary DNA sequences encoding the rat MHC class II RT1-Bu and RT1-Du α and β chains. *Immunogenetics* 55: 344-350.
- 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 β , RT1-B α , RT1-D β and RT1-D α alleles. *Immunogenetics* 56: 585-596.
- Neumann, J. 2005. Novel antibody tags from the rat lysosomal protein RT1.DM for immunodetection of recombinant proteins. *J. Immunol. Methods* 301: 66-76.
- Roos, C. and Walter, L. 2005. Considerable haplotypic diversity in the RT1-CE class I gene region of the rat major histocompatibility complex. *Immunogenetics* 56: 773-777.

SOURCE

RT1-B β (1.B.567) is a mouse monoclonal antibody raised against purified RT1-B β of rat origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

RT1-B β (1.B.567) is recommended for detection of the monomorphic determinant on β chain of RT1-B molecules of mouse and rat 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

Molecular Weight of RT1-B β : 30 kDa.

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 for detailed protocols and support products.