

RT1-B (HIS 19): sc-59359

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

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2. Mizuno, K., et al. 1987. Ir gene for bovine Insulin in the rat maps to RT1-B β . *J. Immunogenet.* 14: 159-162.
3. Fujii, H., et al. 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.
4. Syha-Jedelhauser, J., et al. 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.
5. Easterfield, A.J., et al. 2003. Complementary DNA sequences encoding the rat MHC class II RT1-Bu and RT1-Du α and β chains. *Immunogenetics* 55: 344-350.
6. Ettinger, R.A., et al. 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.
7. Neumann, J. 2005. Novel antibody tags from the rat lysosomal protein RT1.DM for immunodetection of recombinant proteins. *J. Immunol. Methods* 301: 66-76.

SOURCE

RT1-B (HIS 19) is a mouse monoclonal antibody raised against Peyer's Patch lymphocytes of AO rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RT1-B (HIS 19) is available conjugated to agarose (sc-59359 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59359 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59359 PE), fluorescein (sc-59359 FITC), Alexa Fluor[®] 488 (sc-59359 AF488), Alexa Fluor[®] 546 (sc-59359 AF546), Alexa Fluor[®] 594 (sc-59359 AF594) or Alexa Fluor[®] 647 (sc-59359 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-59359 AF680) or Alexa Fluor[®] 790 (sc-59359 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

RT1-B (HIS 19) is recommended for detection of RT1-B 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells); non cross-reactive with RT1n.

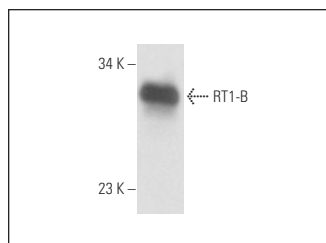
Molecular Weight of RT1-B: 29/30 kDa.

Positive Controls: rat PBL whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RT1-B (HIS 19): sc-59359. Western blot analysis of RT1-B expression in rat PBL 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.

PROTOCOLS

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