SANTA CRUZ BIOTECHNOLOGY, INC.

RT1-Ac (OX27): sc-53076



BACKGROUND

RT1-A refers to the rat class I major histocompatibility (MHC class I) molecules. RT1-A molecules, which consist of class Ia and class Ib molecules, are integral parts of the immune response and present nonself peptides on the cell surface for recognition by cytotoxic T lymphocytes (CTLs). They are composed of two polypeptide chains, an α or heavy chain, and β -2-Microglobulin, a non-covalently associated protein. Cytotoxic T lymphocytes bind antigenic peptides presented by RT1-A molecules. Antigens that bind to RT1-A molecules are typically eight to ten residues in length and are stabilized in a peptide binding groove. RT1-Ac is haplotype c of the RT1-A antigens.

REFERENCES

- Fukumoto, T., McMaster, W.R. and Williams, A.F. 1982. Mouse monoclonal antibodies against rat major histocompatibility antigens. Two Ia antigens and expression of Ia and class I antigens in rat thymus. Eur. J. Immunol. 12: 237-243.
- Forbes, R.D., Lowry, R.P., Darden, A.G., Gomersall, M. and Marghesco, D.M. 1988. Morphologic studies of acute rat cardiac allograft rejection across an isolated major histocompatibility complex class I (RT1-A) disparity. Transplantation 45: 943-948.
- Innes, A., Power, D.A., Cunningham, C., Dillon, D. and Catto, G.R. 1988. The alloantibody response to semiallogeneic pregnancy in the rat. I. Alloantibodies in sera and placental eluates directed to RT1-A antigens. Transplantation 46: 409-413.
- Power, D.A., Cunningham, C., Stewart, K.N., Jones, M.C. and Catto, G.R. 1988. The alloantibody response to semiallogeneic pregnancy in the rat. II. Antibodies in serum directed to multiple epitopes on conventional RT1-A antigens. Transplantation 46: 413-418.
- 5. Propper, D.J., Woo, J., Stewart, K.N., Catto, G.R. and Power, D.A. 1991. Immune responses to noninherited maternal RT1-A antigens in inbred rats. Transplantation 52: 331-335.
- Pockley, A.G., Reid, S.D. and Bowles, M.J. 1996. An enzyme immunoassay for rat soluble MHC class I molecules (RT1-A) and the release of soluble class I from mitogenically stimulated mononuclear cells. Immunol. Invest. 24: 679-687.
- 7. Collins, K.L. and Baltimore, D. 1999. HIV's evasion of the cellular immune response. Immunol. Rev. 168: 65-74.
- 8. Speir, J.A., Stevens, J., Joly, E., Butcher, G.W. and Wilson, I.A. 2001. Two different, highly exposed, bulged structures for an unusually long peptide bound to rat MHC class I RT1-Aa. Immunity 14: 81-92.
- 9. Holmberg, J., Tuncel, J., Yamada, H., Lu, S., Olofsson, P. and Holmdahl, R. 2006. Pristane, a non-antigenic adjuvant, induces MHC class II-restricted, arthritogenic T cells in the rat. J. Immunol. 176: 1172-1179.

SOURCE

RT1-Ac (OX27) is a mouse monoclonal antibody raised against PHA activated lymphocytes of rat origin.

PRODUCT

Each vial contains 200 μg lgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RT1-Ac (0X27) is available conjugated to agarose (sc-53076 AC), 500 μ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53076 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53076 PE), fluorescein (sc-53076 AF1C), Alexa Fluor[®] 488 (sc-53076 AF488), Alexa Fluor[®] 546 (sc-53076 AF546), Alexa Fluor[®] 594 (sc-53076 AF594) or Alexa Fluor[®] 647 (sc-53076 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53076 AF680) or Alexa Fluor[®] 790 (sc-53076 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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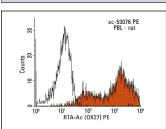
APPLICATIONS

RT1-Ac (0X27) is recommended for detection of RT1-Ac of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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-24941or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



RT1-Ac (OX27): sc-53076. Indirect FCM analysis of rat peripheral blood leukocytes stained with RT1-Ac (OX27), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG1; sc-3877.

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.