Datasheet: MCA46PE

BATCH NUMBER INN1609

Description:	MOUSE ANTI RAT MHC CLASS II RT1B:RPE
Specificity:	MHC CLASS II RT1B
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	OX-6
Isotype:	IgG1
Quantity:	100 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat - 1/2

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species

Rat

Species Cross Reactivity

Reacts with: Mouse

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 1 ml distilled water

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation

Purified IgG prepared by affinity chromatography on Protein A

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin 5% Sucrose
Immunogen	Rat thymocyte membrane glycoproteins.
RRID	AB_322119
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells from the NS1 mouse myeloma cell line.
Specificity	**Mouse anti Rat MHC Class II RT1B antibody, clone OX-6** recognizes a monomorphic determinant of the rat RT1B MHC class II antigen present on B lymphocytes, dendritic cells, some macrophages and certain epithelial cells. Rat MHC Class II RT1B antibody, clone OX-6 does not react with the rat BDIX strain due to a defect in RT1B expression (Male *et al.* 1987). The major histocompatibility complex (MHC) is a cluster of genes that are important in the immune response to infections. In rats, this complex is referred to as the RT1 region. In mice, this complex is referred to as the H-2 region. Mouse anti Rat MHC Class II RT1B antibody, clone OX-6 also cross reacts with a polymorphic determinant on mouse strains of the H-2 haplotypes k and s. Analysis of recombinant mouse strains has mapped the OX-6 determinant to the H-2I-A region (McMaster and Williams 1979 and Male *et al.* 1987). Mouse anti Rat MHC Class II RT1B antibody, clone OX-6 is routinely tested in flow cytometry on rat splenocytes.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. McMaster, W.R. & Williams, A.F. (1979) Identification of Ia glycoproteins in rat thymus and purification from rat spleen. Eur J Immunol. 9 (6): 426-33. 2. Fernandez, J.L. & Weeks, M. (1986) Genetic monitoring of inbred strains of mice using monoclonal antibodies to major histocompatibility haplotypes and lymphocyte alloantigens. Lab Anim. 20 (4): 293-7. 3. Charteris, D.G. & Lightman, S.L. (1993) In vivo lymphokine production in experimental autoimmune uveoretinitis. Immunology. 78 (3): 387-92. 4. Whiteland, J.L. *et al.* (1995) Immunohistochemical detection of T-cell subsets and other leukocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. J Histochem Cytochem. 43 (3): 313-20. 5. McKechnie, N.M. *et al.* (1997) Immunization with the cross-reactive antigens Ov39 from *Onchocerca volvulus* and hr44 from human retinal tissue induces ocular pathology and activates retinal microglia. J Infect Dis. 176 (5): 1334-43.

6. Male, D.K. *et al.* (1987) Serological evidence for a defect in RT1.B (I-A) expression by the BDIX rat strain. J Immunogenet. 14 (6): 301-12.
7. Burrows, G.G. *et al.* (1998) Two-domain MHC class II molecules form stable complexes with myelin basic protein 69-89 peptide that detect and inhibit rat encephalitogenic T cells and treat experimental autoimmune encephalomyelitis. J Immunol. 161 (11): 5987-96.
8. Zilka, N. *et al.* (2009) Human misfolded truncated tau protein promotes activation of microglia and leukocyte infiltration in the transgenic rat model of tauopathy. J Neuroimmunol. 209 (1-2): 16-25.
9. Kawamura, J. *et al.* (2010) Neuron-immune Interactions in the Sensitized Thalamus Induced by Mustard Oil Application to Rat Molar Pulp. J Dent Res. 89: 1309-14.
10. Calvo, M. *et al.* (2010) Neuregulin-ErbB signaling promotes microglial proliferation and chemotaxis contributing to microgliosis and pain after peripheral nerve injury. J Neurosci. 30 (15): 5437-50.
11. McClain, J.A. *et al.* (2011) Adolescent binge alcohol exposure induces long-lasting partial activation of microglia. Brain Behav Immun. 25 Suppl 1: S120-8.
12. Baca Jones, C.C. *et al.* (2009) Rat cytomegalovirus infection depletes MHC II in bone marrow derived dendritic cells. Virology. 388: 78-90.
13. Lobato-Pascual, A. *et al.* (2013) Rat macrophage C-type lectin is an activating receptor expressed by phagocytic cells. PLoS One. 8: e57406.
14. Takizawa, T. *et al.* (2016) High-mobility group box 1 is an important mediator of microglial activation induced by cortical spreading depression Journal of Cerebral Blood Flow & Metabolism. May 3 [Epub ahead of print]
15. Liu, M. *et al.* (2017) Pioglitazone Attenuates Neuroinflammation and Promotes Dopaminergic Neuronal Survival in the Nigrostriatal System of Rats after Diffuse Brain Injury. J Neurotrauma. 34 (2): 414-22.
16. Noailles, A. *et al.* (2018) Systemic inflammation induced by lipopolysaccharide aggravates inherited retinal dystrophy. Cell Death Dis. 9 (3): 350.
17. Stangl, H. *et al.* (2020) MHC/class-II-positive cells inhibit corticosterone of adrenal gland cells in experimental arthritis: a role for IL-1β, IL-18, and the inflammasome. Sci Rep. 10 (1): 17071.
18. Collins, J.J.P. *et al.* (2018) Impaired Angiogenic Supportive Capacity and Altered Gene Expression Profile of Resident CD146^{+} Mesenchymal Stromal Cells Isolated from Hyperoxia-Injured Neonatal Rat Lungs. Stem Cells Dev. 27 (16): 1109-24.
19. Koppe, C. *et al.* (2021) Local Inflammatory Response after Intramuscularly Implantation of Anti-Adhesive Plasma-Fluorocarbon-Polymer Coated Ti6Al4V Discs in Rats. Polymers (Basel). 13 (16): 2684.
20. Matsuyama, S. *et al.* (2021) Properties of macrophages and lymphocytes appearing in rat renal fibrosis followed by repeated injection of cisplatin. J Vet Med Sci. 83 (9): 1435-42.
21. Maneu, V. *et al.* (2016) Immunosuppression, peripheral inflammation and invasive infection from endogenous gut microbiota activate retinal microglia in mouse models. Microbiol Immunol. 60 (9): 617-25.
22. Silva, A.B. *et al.* (2021) Understanding the role of the blood brain barrier and peripheral inflammation on behaviour and pathology on ongoing confined cortical lesions Multiple Sclerosis and Related Disorders. : 103346.
23. Sarkar, T. *et al.* (2022) Perinatal exposure to synergistic multiple stressors lead to cellular and behavioral deficits mimicking Schizophrenia like pathology Biology Open. 02 Feb [Epub ahead of print].

24. Pervin, M. *et al.* (2022) Possible Cytoprotection of Low Dose Lipopolysaccharide in Rat Thioacetamide-Induced Liver Lesions, Focusing on the Analyses of Hepatic Macrophages and Autophagy. Toxicol Pathol. : 1926233221076758.
25. Cąkała-Jakimowicz, M. & Puzianowska-Kuznicka, M. (2022) Towards Understanding the Lymph Node Response to Skin Infection with Saprophytic *Staphylococcus epidermidis*. Biomedicines. 10 (5): 1021.
26. Sawanobori, Y. *et al.* (2021) Selective involution of thymic medulla by cyclosporine A with a decrease of mature thymic epithelia, XCR1^{+} dendritic cells, and epithelium-free areas containing Foxp3^{+} thymic regulatory T cells. Histochem Cell Biol. 156 (2): 133-146.

Storage	Prior to reconstitution store at +4^{o}C. Following reconstitution store at +4^{o}C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA46PE 20487
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA1209PE)

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com
Worldwide Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com
Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M375562:210104'

Printed on 26 Mar 2025