Datasheet: MCA45PE

Description:	MOUSE ANTI RAT MHC CLASS II RT1Bu/l:RPE
Specificity:	MHC CLASS II RT1Bu/l
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	OX-3
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

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 G from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin 5% Sucrose
Immunogen	Rat thymocyte membrane glycoproteins.
RRID	AB_322118
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells from the NS1 mouse myeloma cell line.
Specificity	**Mouse anti Rat MHC Class II RT1Bu/L antibody, clone OX-3** recognizes a polymorphic determinant of the rat RT1B MHC class II antigen, reacting with haplotypes u and l. The literature reports reactivity with Lewis, Wistar and AO strain rats but not BN, DA or PVG/c strains. This antibody is useful for distinguishing RT1B positive cells from different rat strains, e.g. for recognising cells of donor origin in bone marrow reconstituted radiation chimaeras. 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 RT1Bu/L antibody, clone OX-3 also cross reacts with mouse strains of the H-2 haplotypes b and s. Analysis of recombinant mouse strains has mapped the OX-3 determinant to the H-2I-A region. This product is routinely tested in flow cytometry on Lewis 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. McMaster, W.R. & Williams, A.F. (1979) Monoclonal antibodies to Ia antigens from rat thymus: cross reactions with mouse and human and use in purification of rat Ia glycoproteins. Immunol Rev. 47: 117-37. 3. Barclay, A.N. & Mayrhofer, G. (1981) Bone marrow origin of Ia-positive cells in the medulla rat thymus. J Exp Med. 153 (6): 1666-71. 4. Zhang, J. *et al.* (1997) Expression of major histocompatibility complex molecules in rodent retina. Immunohistochemical study. Invest Ophthalmol Vis Sci. 38 (9): 1848-57. 5. Hahm, K.B. *et al.* (2000) Loss of TGF-beta signaling contributes to autoimmune pancreatitis. J Clin Invest. 105 (8): 1057-65. 6. Wu, S.Y. *et al.* (2016) Estrogen ameliorates microglial activation by inhibiting the Kir2.1 inward-rectifier K(+) channel. Sci Rep. 6: 22864. 7. Fisher, R.A. *et al.* (1996) Induction of long-term graft tolerance and donor/recipient chimerism. J Surg Res. 60 (1): 181-5.

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14. Pascher A *et al.* (2006) Rat cytomegalovirus infection interferes with anti-CD4 mAb-(RIB 5/2) mediated tolerance and induces chronic allograft damage. Am J Transplant. 6 (9): 2035-45.
15. Hartmann CB *et al.* (2005) Immunotoxicity of gallium arsenide on antigen presentation: comparative study of intratracheal and intraperitoneal exposure routes. J Immunotoxicol. 2 (1): 1-9.
16. Lima, R.R. *et al.* (2022) Inflammatory Response and Secondary White Matter Damage to the Corpus Callosum after Focal Striatal Stroke in Rats. Int J Mol Sci. 23 (6)Mar 16 [Epub ahead of print].
17. Duhalde Vega, M *et al.* (2022) PD-1/PD-L1 blockade abrogates a dysfunctional innate-adaptive immune axis in critical β-coronavirus disease. Sci Adv. 8 (38): eabn6545.

Further Reading	1. Barclay, A.N. (1981) The localization of populations of lymphocytes defined by monoclonal antibodies in rat lymphoid tissues. Immunology. 42 (4): 593-600.
Storage	This product is shipped at ambient temperature. Prior to reconstitution store at +4°C. Following reconstitution store at +4°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	6 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA45PE 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

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