Datasheet: MCA453F

BATCH NUMBER 164959

Description:	MOUSE ANTI RAT TCR ALPHA/BETA:FITC
Specificity:	TCR ALPHA/BETA
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	R73
Isotype:	IgG1
Quantity:	0.1 mg

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 - 1/5

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: Monkey, Cynomolgus monkey

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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Rat T blasts and erythrocytes.
RRID	AB_322439
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the X63.Ag8.653 mouse myeloma cell line.
Specificity	**Mouse anti Rat TCR alpha/beta antibody, clone R73** recognizes a constant determinant on the beta chain of the rat alpha/beta T cell receptor, expressed by 97% of peripheral rat T cells as defined by the OX-52 marker. R73 is mitogenic for unseparated spleen cells and for purified T cells. In the rat thymus, mature medullary cells express the R73 determinant at the same levels as peripheral T cells, whereas 94% of CD4 - CD8 - thymocytes are R73 negative. Mouse anti Rat TCR alpha/beta antibody, clone R73 is reported to stimulate adhesion between Thymic Dendritic Cells and Thymocytes (Colic *et al.* 2010).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 lymphocytes in 100ul.
References	1. Tomida, S. *et al.* (1994) Intercellular adhesion molecule-1 and leukocyte function-associated antigen-1 are involved in protection mediated by CD3+TCR alpha beta- T cells at the early stage after infection with Listeria monocytogenes in rats. Int Immunol. 6 (7): 955-61. 2. Colić, M. *et al.* (1996) Mechanisms involved in the binding of thymocytes to rat thymic dendritic cells. Dev Immunol. 5 (1): 37-51. 3. Kanellis, J. *et al.* (2010) JNK signalling in human and experimental renal ischaemia/reperfusion injury. Nephrol Dial Transplant. 25: 2898-908. 4. Nave, H. *et al.* (2008) Resistance of Janus kinase-2 dependent leptin signaling in natural killer (NK) cells: a novel mechanism of NK cell dysfunction in diet-induced obesity. Endocrinology. 149: 3370-8. 5. Tsuchida, M. *et al.* (1994) Identification of CD4- CD8- alpha beta T cells in the subarachnoid space of rats with experimental autoimmune encephalomyelitis. A possible route by which effector cells invade the lesions. Immunology. 81 (3): 420-7. 6. Matsumoto, Y. *et al.* (1994) Successful prevention and treatment of autoimmune encephalomyelitis by short-term administration of anti-T-cell receptor alpha beta antibody. Immunology. 81 (1): 1-7. 7. Pilipović, I. *et al.* (2010) Glucocorticoids, master modulators of the thymic catecholaminergic system? Braz J Med Biol Res. 43 (3): 279-84. 8. Milicevic, N.M. *et al.* (2005) T cells are required for the peripheral phase of B-cell maturation. Immunology. 116: 308-17. 9. Kenny, E. *et al.* (2000) Phenotypic analysis of peripheral CD4+ CD8+ T cells in the rat. Immunology. 101: 178-84.

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18. 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.
19. Schmiedl, A. *et al.* (2021) Lung development and immune status under chronic LPS exposure in rat pups with and without CD26/DPP4 deficiency. Cell Tissue Res. Oct 04 [Epub ahead of print].
20. Köhler, R. *et al.* (2022) Association of systemic antibody response against polyethylene terephthalate with inflammatory serum cytokine profile following implantation of differently coated vascular prostheses in a rat animal model. J Biomed Mater Res A. 110 (1): 52-63.
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Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Guarantee

12 months from date of despatch

Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA453F 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA1209F)

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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