

# Datasheet: MCA51FT

Description:	MOUSE ANTI RAT MHC CLASS I RT1A:FITC
Specificity:	MHC CLASS I RT1A
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	OX-18
lsotype:	lgG1
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 - 1/10		
	Immunohistology - Fro		-				
	Immunohistology - Par		-				
	-				e this does not necessarily		
	exclude its use in such procedures. Suggested working dilutions are given as a gui						
	recommended that	the user titrates the	antibody	for use in their own sys	tem using appropriate		
	negative/positive co	ntrols.					
Target Species	Rat						
Product Form	Purified IgG conjuga	ated to Fluorescein	Isothiocy	anate Isomer 1 (FITC) -	liquid		
Max Ex/Em	Fluorophore	Excitation Max (	nm) Em	ission Max (nm)			
	FITC	490		525			
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant						
Buffer Solution	Phosphate buffered saline						
Preservative	0.09% Sodium Azid	e					
Stabilisers	1% Bovine Serum Albumin						
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml						
Immunogen	Rat spleen cell glycoproteins						
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse P3X63Ag8.653 myeloma cell line.						

Specificity	<b>Mouse anti Rat MHC Class I RT1A antibody, clone OX-18</b> recognizes a monomorphic determinant of rat MHC Class I (RT1A), expressed by all rat strains. However, quantitative measurements suggest that not all of the class I molecules are recognized.		
	Mouse anti Rat MHC Class I RT1A antibody, clone OX-18 has been used in immunoaffinity purification of rat MHC class I molecules ( <u>Fukumoto <i>et al.</i> 1982</u> ).		
	Mouse anti Rat MHC Class I RT1A antibody, clone OX-18 is routinely tested in flow cytometry on rat splenocytes.		
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.		
Immunohistology	Acetone fixation recommended - the antigen is sensitive to fixation with paraformaldehyde.		
References	<ol> <li>Fukumoto, T. <i>et al.</i> (1982) Mouse monoclonal antibodies against rat major histocompatibility antigens. Two la antigens and expression of la and class I antigens in rat thymus. <u>Eur J Immunol.</u> 12 (3): 237-43.</li> <li>Bukovský, A. <i>et al.</i> (1984) Association of some cell surface antigens of lymphoid cells and cell surface differentiation antigens with early rat pregnancy. <u>Immunology. 52: 631-40</u></li> <li>Osawa, H. <i>et al.</i> (1985) Inhibition of IL 2-dependent proliferation of rat T lymphoblasts by the monoclonal antibody ART62 which reacts with MHC class 1 antigens. <u>J Immunol. 134 (6): 3901-6</u>.</li> <li>Chacon, M.A. &amp; Boulanger, L.M. (2013) MHC class I protein is expressed by neurons and neuroprogenitors in mid-gestation mouse brain. <u>Mol Cell Neurosci. 52: 117-27</u>.</li> <li>Fujikawa, L.S. <i>et al.</i> (1989) Class II antigens on retinal vascular endothelium, pericytes, macrophages, and lymphocytes of the rat. Invest Ophthalmol Vis Sci. 30 (1): 66-73.</li> <li>Zhai, Y. and Knechtle, S. <i>et al.</i> (1998) Two distinct forms of soluble MHC class I molecules synthesized by different mechanisms in normal rat cells in vitro <u>Human Immunol. 59: 404-14</u></li> <li>Baca Jones, C.C. <i>et al.</i> (2009) Rat cytomegalovirus infection depletes MHC II in bone marrow derived dendritic cells. <u>Virology. 388: 78-90</u>.</li> <li>Edamura, M. <i>et al.</i> (2014) Correlations between blood-brain barrier disruption and neuroinflammation in an experimental model of penetrating ballistic-like brain injury. <u>J Neurotraums 31 (5): 505-14.</u></li> <li>Skwirba, M. <i>et al.</i> (2014) Expression of nestin after renal transplantation in the rat. <u>APMIS. 122 (10): 1020-31.</u></li> <li>Schon-Salazar, T.J. <i>et al.</i> (2014) MHC class I limits hippocampal synapse density by inhibiting neuronal insulin receptor signaling. <u>J Neurosci. 34 (35): 11844-56.</u></li> <li>linuma, C. <i>et al.</i> (2013) Pre-immunization with an intramuscular injection of AAV9-human erythropoietin vectors reduces the vector-mediated transduction foll</li></ol>		
	17. Ma, R. et al. (2013) Structural integrity, ECM components and immunogenicity of decellularized		

	Penetrating Ballistic-Like Brain Injury. <u>J Neurotrauma. 32 (20): 1621-32.</u>
	19. Treacy, O. et al. (2012) Adenoviral transduction of mesenchymal stem cells: in vitro responses
	and in vivo immune responses after cell transplantation. PLoS One. 7 (8): e42662.
	20. Inácio, R.F. et al. (2012) Interferon beta modulates major histocompatibility complex class I
	(MHC I) and CD3-zeta expression in PC12 cells. Neurosci Lett. 513 (2): 223-8.
	21. Zhang, J. et al. (2017) Changes in expressions of MHCI, PirB and CD3 $\zeta$ in motor cortical
	representations of the brachial plexus after avulsion in rats. World Neurosurg. Jun 29. pii:
	S1878-8750(17)31028-8. [Epub ahead of print]
	22. Yang, Y.M. et al. (2013) Microglial TNF-α-dependent elevation of MHC class I expression on
	brain endothelium induced by amyloid-beta promotes T cell transendothelial migration. Neurochem
	<u>Res. 38 (11): 2295-304.</u>
	23. Otto, C. et al. (2012) Immunisation with an allogeneic peptide promotes the induction of
	antigen-specific MHC II(pos) CD4+ rat T cells demonstrating immunostimulatory properties. <u>Transpl</u>
	Immunol. 26 (4): 220-9.
	24. Coiro, P. et al. (2015) Impaired synaptic development in a maternal immune activation mouse
	model of neurodevelopmental disorders. Brain Behav Immun. pii: S0889-1591(15)00417-1.
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	expression for astroglial reactivity and stability of neural circuits in vitro. Neurosci Lett. 647: 97-103.
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Shelf Life Health And Safety	This product should be stored undiluted. Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use. 18 months from date of despatch. Material Safety Datasheet documentation #10041 available at:
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### **Related Products**

### **Recommended Negative Controls**

#### MOUSE IgG1 NEGATIVE CONTROL: FITC (MCA1209F)

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

'M324631:180727'

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