

## Datasheet: MCA48G

<b>Description:</b>	MOUSE ANTI RAT CD8 ALPHA
<b>Specificity:</b>	CD8 ALPHA
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	OX-8
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			
Immunofluorescence	▪			

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.

<b>Target Species</b>	Rat
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes

<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Rat thymocyte membrane glycoproteins.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P07725</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">24930</a>   Cd8a   <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_321476
<b>Fusion Partners</b>	Spleen cells from immunized BALB/c mice were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Rat CD8α, clone MRC OX-8</b>, recognizes the rat CD8 alpha cell surface antigen, expressed by a subset of T lymphocytes, most thymocytes and the majority of NK cells.</p> <p>Mouse anti Rat CD8α, clone MRC OX-8 is suitable for use in <i>in vitro</i> blocking assays (<a href="#">Popov et al.2001</a>).</p> <p>Mouse anti Rat CD8α, clone MRC OX-8 reacts with paraffin-embedded material following PLP Fixation (periodate-lysine paraformaldehyde) (<a href="#">Whiteland et al. 1995</a>).</p> <p>Mouse anti Rat CD8α, clone MRC OX-8 is routinely tested in flow cytometry on rat splenocytes.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>Immunohistology</b>	<p>This product does not require protein digestion pre-treatment of paraffin embedded sections.</p> <p>This product does not require antigen retrieval using heat treatment prior to staining of paraffin embedded sections.</p>
<b>References</b>	<ol style="list-style-type: none"> <li>1. Thomas, M.L. &amp; Green, J.R. (1983) Molecular nature of the W3/25 and MRC OX-8 marker antigens for rat T lymphocytes: comparisons with mouse and human antigens. <a href="#">Eur J Immunol. 13 (10): 855-8.</a></li> <li>2. 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. <a href="#">Immunology. 52 (4): 631-40.</a></li> <li>3. Torres-Nagel, N. <i>et al.</i> (1992) Differential thymus dependence of rat CD8 isoform expression. <a href="#">Eur J Immunol. 22 (11): 2841-8.</a></li> <li>4. Whiteland, J.L. <i>et al.</i> (1995) Immunohistochemical detection of T-cell subsets and other leukocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. <a href="#">J Histochem Cytochem. 43 (3): 313-20.</a></li> </ol>

5. Mitnacht, R. *et al.* (1998) Opposite CD4/CD8 lineage decisions of CD4+8+ mouse and rat thymocytes to equivalent triggering signals: correlation with thymic expression of a truncated CD8 alpha chain in mice but not rats. [J Immunol. 160 \(2\): 700-7.](#)
6. Popov, I. *et al.* (2001) The effect of an anti-HLA-B27 immune response on CTL recognition of *Chlamydia*. [J Immunol. 167 \(6\): 3375-82.](#)
7. Hashimoto, Y. *et al.* (2003) Two major histocompatibility complex class I-restricted epitopes of the Borna disease virus p10 protein identified by cytotoxic T lymphocytes induced by DNA-based immunization. [J Virol. 77: 6076-81.](#)
8. Bradl, M. *et al.* (2005) Complementary contribution of CD4 and CD8 T lymphocytes to T-cell infiltration of the intact and the degenerative spinal cord. [Am J Pathol. 166: 1441-50.](#)
9. Latta, M. *et al.* (2007) CXCR6 is expressed on T cells in both T helper type 1 (Th1) inflammation and allergen-induced Th2 lung inflammation but is only a weak mediator of chemotaxis. [Immunology. 121: 555-64](#)
10. King, G.D. *et al.* (2008) Flt3L in combination with HSV1-TK-mediated gene therapy reverses brain tumor-induced behavioral deficits. [Mol Ther. 16: 682-90](#)
11. Bode, U. *et al.* (2008) Dendritic cell subsets in lymph nodes are characterized by the specific draining area and influence the phenotype and fate of primed T cells. [Immunology. 123: 480-90.](#)
12. Schwartzkopff, J. *et al.* (2010) NK cell depletion delays corneal allograft rejection in baby rats. [Mol Vis. 16: 1928-35.](#)
13. Sanchez-Guajardo, V. (2010) Microglia acquire distinct activation profiles depending on the degree of alpha-synuclein neuropathology in a rAAV based model of Parkinson's disease. [PLoS One. 5: e8784.](#)
14. Maenz, M. *et al.* (2011) A comprehensive flow-cytometric analysis of graft infiltrating lymphocytes, draining lymph nodes and serum during the rejection phase in a fully allogeneic rat cornea transplant model. [Mol Vis. 2011 Feb 8;17:420-9.](#)
15. Arndt, T. *et al.* (2013) A variable CD3<sup>+</sup> T-cell frequency in peripheral blood lymphocytes associated with type 1 diabetes mellitus development in the LEW.1AR1-iddm rat. [PLoS One. 8 \(5\): e64305.](#)
16. Granados-Durán P *et al.* (2015) Neuroinflammation induced by intracerebroventricular injection of microbial neuraminidase. [Front Med \(Lausanne\). 2: 14.](#)
17. Nuccitelli R *et al.* (2015) Nanoelectroablation of Murine Tumors Triggers a CD8-Dependent Inhibition of Secondary Tumor Growth. [PLoS One. 10 \(7\): e0134364.](#)
18. Zhang, Z.M. *et al.* (2016) Lesional accumulation of CD8(+) cells in sciatic nerves of experimental autoimmune neuritis rats. [Neurol Sci. 37 \(2\): 199-203.](#)
19. Pamukcu, O. *et al.* (2016) Anti-inflammatory role of obestatin in autoimmune myocarditis. [Clin Exp Pharmacol Physiol. 43 \(1\): 47-55.](#)
20. Dabrowska, S. *et al.* (2019) Human bone marrow mesenchymal stem cell-derived extracellular vesicles attenuate neuroinflammation evoked by focal brain injury in rats. [J Neuroinflammation. 16 \(1\): 216.](#)
21. James, R.E. *et al.* (2020) Persistent elevation of intrathecal pro-inflammatory cytokines leads to multiple sclerosis-like cortical demyelination and neurodegeneration. [Acta Neuropathol Commun. 8 \(1\): 66.](#)
22. 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.](#)
23. Dabrowska, S. *et al.* (2021) Neuroinflammation evoked by brain injury in a rat model of lacunar infarct. [Exp Neurol. 336: 113531.](#)

24. 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. 386 \(3\): 617-36.](#)
25. Zakerkish, F. *et al.* (2021) Differential effects of the immunosuppressive calcineurin inhibitors cyclosporine-A and tacrolimus on ovulation in a murine model. [Hum Reprod Open. 2021 \(2\): hoab012.](#)
26. Lane, E.L. *et al.* (2022) Spontaneous Graft-Induced Dyskinesias Are Independent of 5-HT Neurons and Levodopa Priming in a Model of Parkinson's Disease. [Mov Disord. 37 \(3\): 613-9.](#)
27. Silva, B.A. *et al.* (2022) Understanding the role of the blood brain barrier and peripheral inflammation on behavior and pathology on ongoing confined cortical lesions. [Mult Scler Relat Disord. 57: 103346.](#)
28. Hoff, U. *et al.* (2022) The mTOR inhibitor Rapamycin protects from premature cellular senescence early after experimental kidney transplantation. [PLoS One. 17 \(4\): e0266319.](#)
29. Gad, R.A. *et al.* (2022) Mitigating effects of *Passiflora incarnata*. on oxidative stress and neuroinflammation in case of pilocarpine-Induced status epilepticus model [J King Saud Uni - Science. 34 \(3\): 101886.](#)
30. Cakala-Jakimowicz, M. & Puzianowska-Kuznicka, M. (2022) Towards Understanding the Lymph Node Response to Skin Infection with Saprophytic *Staphylococcus epidermidis*. [Biomedicines. 10 \(5\): 1021.](#)
31. Du, K. *et al.* (2023) Pathogenesis of selective damage of granule cell layer in cerebellum of rats exposed to methylmercury [J Toxicol Sci 48 \(7\): 429-39.](#)
32. Santos Filho, L.E.D. *et al.* (2023) Dietary Soy Isoflavones Prevent Metabolic Disturbs Associated with a Deleterious Combination of Obesity and Menopause. [J Med Food. 26 \(2\): 104-13.](#)
33. Midavaine, É. *et al.* (2024) Discovery of a CCR2-targeting pepducin therapy for chronic pain. [Pharmacol Res. : 107242.](#)
34. James, R.B. *et al.* (2022) Lymphotoxin- $\alpha$  expression in the meninges causes lymphoid tissue formation and neurodegeneration. [Brain. 145 \(12\): 4287-307.](#)
35. Ménoret, S. *et al.* (2020) *In Vivo* Analysis of Human Immune Responses in Immunodeficient Rats. [Transplantation. 104 \(4\): 715-23.](#)

<b>Storage</b>	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA48G">https://www.bio-rad-antibodies.com/SDS/MCA48G</a></p> <p>10040</p>
<b>Regulatory</b>	For research purposes only

## Related Products

## Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>

## Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA1209\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

'M384202:210513'

Printed on 23 May 2025