

## Datasheet: MCA500G

**BATCH NUMBER 1803**

<b>Description:</b>	RAT ANTI MOUSE CD3
<b>Specificity:</b>	CD3
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	KT3
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.25 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 (1)	▪			
Immunohistology - Paraffin		▪		
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	

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.

**(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.**

<b>Target Species</b>	Mouse
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G 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>	CBAT6 thymocytes
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P22646</a>    <a href="#">Related reagents</a></p> <p><a href="#">P24161</a>    <a href="#">Related reagents</a></p> <p><a href="#">P11942</a>    <a href="#">Related reagents</a></p> <p><a href="#">P29020</a>    <a href="#">Related reagents</a></p> <p><a href="#">P04235</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">12501</a> Cd3e    <a href="#">Related reagents</a></p> <p><a href="#">12503</a> Cd247    <a href="#">Related reagents</a></p> <p><a href="#">12500</a> Cd3d    <a href="#">Related reagents</a></p> <p><a href="#">12502</a> Cd3g    <a href="#">Related reagents</a></p> <p><a href="#">12503</a> Cd247    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Cd3z, T3d, Tcrz
<b>RRID</b>	AB_321252
<b>Fusion Partners</b>	Spleen cells from immunized SD rats were fused with cells of the NS0 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti Mouse CD3 antibody, clone KT3</b> recognizes the mouse CD3 antigen, expressed by mature T cells. Rat anti Mouse CD3 antibody, clone KT3 may be used to trigger proliferation and cytotoxicity of CD3 positive cells (<a href="#">Tomonari 1988</a>).</p> <p>NB. For optimal staining incubations should be performed at room temperature.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Tomonari, K. (1988) A rat antibody against a structure functionally related to the mouse T-cell receptor/T3 complex. <a href="#">Immunogenetics. 28 (6): 455-8.</a></li> <li>2. Lacroix-Lamandé, S. <i>et al.</i> (2002) Role of gamma interferon in chemokine expression in the ileum of mice and in a murine intestinal epithelial cell line after <i>Cryptosporidium parvum</i> infection. <a href="#">Infect Immun. 70 (4): 2090-9.</a></li> <li>3. Tomonari, K. &amp; Lovering, E. (1988) T-cell receptor-specific monoclonal antibodies against a V beta 11-positive mouse T-cell clone. <a href="#">Immunogenetics. 28 (6): 445-51.</a></li> <li>4. Haroon, F. <i>et al.</i>, (2011) Gp130-dependent astrocytic survival is critical for the control of</li> </ol>

- autoimmune central nervous system inflammation. [J Immunol. 186: 6521-31.](#)
5. Kumar, L. *et al.* (2002) Differential role of SLP-76 domains in T cell development and function. [Proc Natl Acad Sci U S A. 99: 884-9.](#)
6. Hirsh, M. *et al.* (2004) Response of lung gammadelta T cells to experimental sepsis in mice. [Immunology. 112: 153-60.](#)
7. Tarlton, J.F. *et al.* (2000) The role of up-regulated serine proteases and matrix metalloproteinases in the pathogenesis of a murine model of colitis. [Am J Pathol. 157: 1927-35.](#)
8. Lazarovits, A.I. *et al.* (1999) Mechanisms of induction of renal allograft tolerance in CD45RB-treated mice. [Kidney Int. 55: 1303-10.](#)
9. Bauer, D. *et al.* (2009) Amniotic membrane transplantation induces apoptosis in T lymphocytes in murine corneas with experimental herpetic stromal keratitis [Invest Ophthalmol Vis Sci. 50: 3188-98.](#)
10. Heitmann, S. *et al.* (1999) Immunohistological characterization of leukocytes in the lungs of healthy mice and after bacterial intratracheal infection. [Lab Anim. 33: 288-94.](#)
11. Hare, K.J. *et al.* (2003) Modeling TCR signaling complex formation in positive selection. [J Immunol. 171: 2825-31.](#)
12. Erlandsson, L. *et al.* (2004) Impaired B-1 and B-2 B cell development and atypical splenic B cell structures in IL-7 receptor-deficient mice. [Eur J Immunol. 34: 3595-603.](#)
13. Severinová, J. *et al.* (2005) Co-inoculation of *Borrelia afzelii* with tick salivary gland extract influences distribution of immunocompetent cells in the skin and lymph nodes of mice. [Folia Microbiol \(Praha\). 50: 457-63.](#)
14. Rothhammer, V. *et al.* (2011) Th17 lymphocytes traffic to the central nervous system independently of  $\alpha 4$  integrin expression during EAE. [J Exp Med. 208 \(12\): 2465-76.](#)
15. Salem, M. *et al.* (2011) Interferon regulatory factor-7 modulates experimental autoimmune encephalomyelitis in mice. [J Neuroinflammation. 8: 181.](#)
16. Hoeksema, M.A. *et al.* (2014) Targeting macrophage Histone deacetylase 3 stabilizes atherosclerotic lesions. [EMBO Mol Med. pii: e201404170.](#)
17. Scheinert, R.B. *et al.* (2016) Therapeutic effects of stress-programmed lymphocytes transferred to chronically stressed mice. [Prog Neuropsychopharmacol Biol Psychiatry. Apr 21. pii: S0278-5846\(16\)30056-2. \[Epub ahead of print\]](#)
18. Schaut, R.G. *et al.* (2015) Bovine viral diarrhea virus type 2 *in vivo* infection modulates TLR4 responsiveness in differentiated myeloid cells which is associated with decreased MyD88 expression. [Virus Res. 208: 44-55.](#)
19. Janssen, E. *et al.* (2016) A DOCK8-WIP-WASp complex links T cell receptors to the actin cytoskeleton. [J Clin Invest. 126 \(10\): 3837-51.](#)
20. Teeling, J.L. *et al.* (2012) Intracerebral immune complex formation induces inflammation in the brain that depends on Fc receptor interaction. [Acta Neuropathol. 124 \(4\): 479-90.](#)
21. Van Aelst, L.N. *et al.* (2016) RNA Profiling in Human and Murine Transplanted Hearts: Identification and Validation of Therapeutic Targets for Acute Cardiac and Renal Allograft Rejection. [Am J Transplant. 16 \(1\): 99-110.](#)
22. Kim, I. *et al.* (2016) Immunological characterization of de novo and recall alloantibody suppression by CTLA4Ig in a mouse model of allosensitization. [Transpl Immunol. 38: 84-92.](#)
23. Massa, M.G. *et al.* (2017) Testosterone Differentially Affects T Cells and Neurons in Murine and Human Models of Neuroinflammation and Neurodegeneration. [Am J Pathol.](#)

[187 \(7\): 1613-22.](#)

24. Zamudio, F. *et al.* (2020) TDP-43 mediated blood-brain barrier permeability and leukocyte infiltration promote neurodegeneration in a low-grade systemic inflammation mouse model. [J Neuroinflammation. 17 \(1\): 283.](#)

25. Yun, M. *et al.* (2020) Enriched-Baicalein Attenuates Allergy in Cells and Mice [Ev-Based Comp Alt Med.. 2020: 1-8.](#)

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**Storage** Store at +4°C or at -20°C if preferred.

This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Storage in frost-free freezers is not recommended.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA500G>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR20...) [RPE](#)  
Goat Anti Rat IgG (STAR69...) [FITC](#)  
Goat Anti Rat IgG (STAR73...) [RPE](#)  
Donkey Anti Rat IgG (H/L) (643001...) [HRP](#)  
Rabbit Anti Rat IgG (STAR21...) [HRP](#)  
Goat Anti Rat IgG (STAR131...) [Alk. Phos.](#)  
Rabbit Anti Rat IgG (STAR17...) [FITC](#)

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

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