

## Datasheet: MCA500PE

<b>Description:</b>	RAT ANTI MOUSE CD3:RPE
<b>Specificity:</b>	CD3
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	KT3
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Mouse						
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized						
<b>Reconstitution</b>	Reconstitute with 1.0 ml distilled water						
<b>Max Ex/Em</b>	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>RPE 488nm laser</td> <td>496</td> <td>578</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	RPE 488nm laser	496	578
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
RPE 488nm laser	496	578					
<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</b>	0.09% Sodium Azide						
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose						

## External Database

## Links

## UniProt:

<a href="#">P22646</a>	<a href="#">Related reagents</a>
<a href="#">P24161</a>	<a href="#">Related reagents</a>
<a href="#">P11942</a>	<a href="#">Related reagents</a>
<a href="#">P29020</a>	<a href="#">Related reagents</a>
<a href="#">P04235</a>	<a href="#">Related reagents</a>

## Entrez Gene:

<a href="#">12501</a>	Cd3e	<a href="#">Related reagents</a>
<a href="#">12503</a>	Cd247	<a href="#">Related reagents</a>
<a href="#">12500</a>	Cd3d	<a href="#">Related reagents</a>
<a href="#">12502</a>	Cd3g	<a href="#">Related reagents</a>
<a href="#">12503</a>	Cd247	<a href="#">Related reagents</a>

## Synonyms

Cd3z, T3d, Tcrz

## RRID

AB\_321257

## Fusion Partners

Spleen cells from immunized SD rats were fused with cells of the NS0 mouse myeloma cell line.

## Specificity

**Rat anti Mouse CD3 antibody, clone KT3** 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 ([Tomonari 1988](#)).

NB. For optimal staining incubations should be performed at room temperature.

## Flow Cytometry

Use 10ul of the suggested working dilution to label  $10^6$  cells or 100ul whole blood.

The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR ([BUF041A/B](#)).

## References

1. Tomonari, K. (1988) A rat antibody against a structure functionally related to the mouse T-cell receptor/T3 complex. [Immunogenetics. 28 \(6\): 455-8.](#)
2. Lacroix-Lamandé, S. *et al.* (2002) Role of gamma interferon in chemokine expression in the ileum of mice and in a murine intestinal epithelial cell line after *Cryptosporidium parvum* infection. [Infect Immun. 70 \(4\): 2090-9.](#)
3. Tomonari, K. & Lovering, E. (1988) T-cell receptor-specific monoclonal antibodies against a V beta 11-positive mouse T-cell clone. [Immunogenetics. 28 \(6\): 445-51.](#)
4. Haroon, F. *et al.*, (2011) Gp130-dependent astrocytic survival is critical for the control of 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.](#)

26. Granadillo, M. *et al.* (2019) Impact on antitumor response using a new adjuvant preparation as a component of a human papillomavirus type 16 therapeutic vaccine candidate. [Vaccine. 37 \(30\): 3957-60.](#)

---

**Storage**

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**

12 months from date of despatch

---

**Health And Safety Information**

Material Safety Datasheet documentation #20487 available at: 20487: <https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf>

---

**Regulatory**

For research purposes only

---

## Related Products

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:RPE \(MCA1212PE\)](#)

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto: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](mailto: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](mailto: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](https://www.bio-rad-antibodies.com/datasheets)

'M375579:210104'

**Printed on 19 Oct 2021**

---

© 2021 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)