

Datasheet: MCA500PE

BATCH NUMBER 151333

| | |
|----------------------|------------------------|
| Description: | RAT ANTI MOUSE CD3:RPE |
| Specificity: | CD3 |
| Format: | RPE |
| Product Type: | Monoclonal Antibody |
| Clone: | KT3 |
| Isotype: | IgG2a |
| Quantity: | 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.

| | 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.

| Target Species | Mouse | | | | | | |
|---------------------------------|---|-------------------|---------------------|-------------------|-----------------|-----|-----|
| Product Form | Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized | | | | | | |
| Reconstitution | Reconstitute with 1.0 ml distilled water | | | | | | |
| Max Ex/Em | <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 | | | | | |
| 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 5% Sucrose | | | | | | |

| | |
|--------------------------------|--|
| Immunogen | CBAT6 thymocytes |
| External Database Links | <p>UniProt:</p> <p>P22646 Related reagents</p> <p>P24161 Related reagents</p> <p>P11942 Related reagents</p> <p>P29020 Related reagents</p> <p>P04235 Related reagents</p> <p>Entrez Gene:</p> <p>12501 Cd3e Related reagents</p> <p>12503 Cd247 Related reagents</p> <p>12500 Cd3d Related reagents</p> <p>12502 Cd3g Related reagents</p> <p>12503 Cd247 Related reagents</p> |
| 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 | <p>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).</p> <p>NB. For optimal staining incubations should be performed at room temperature.</p> |
| Flow Cytometry | <p>Use 10ul of the suggested working dilution to label 10⁶ cells or 100ul whole blood.</p> <p>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).</p> |
| References | <ol style="list-style-type: none"> 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. Lazarovits, A.I. <i>et al.</i> (1999) Mechanisms of induction of renal allograft tolerance in CD45RB-treated mice. Kidney Int. 55: 1303-10. 3. Heitmann, S. <i>et al.</i> (1999) Immunohistological characterization of leukocytes in the lungs of healthy mice and after bacterial intratracheal infection. Lab Anim. 33: 288-94. 4. Tarlton, J.F. <i>et al.</i> (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. 5. 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. Infect Immun. 70 (4): 2090-9. |

6. 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.](#)
7. Hare, K.J. *et al.* (2003) Modeling TCR signaling complex formation in positive selection. [J Immunol. 171: 2825-31.](#)
8. 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.](#)
9. Hirsh, M. *et al.* (2004) Response of lung gammadelta T cells to experimental sepsis in mice. [Immunology. 112: 153-60.](#)
10. 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.](#)
11. 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.](#)
12. 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.](#)
13. 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.](#)
14. Salem, M. *et al.* (2011) Interferon regulatory factor-7 modulates experimental autoimmune encephalomyelitis in mice. [J Neuroinflammation. 8: 181.](#)
15. 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.](#)
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. 70: 1-7.](#)
18. 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.](#)
19. 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.](#)
20. 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.](#)
21. 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.](#)
22. 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.](#)
23. Yun, M. *et al.* (2020) Enriched-Baicalein Attenuates Allergy in Cells and Mice [Ev-Based Comp Alt Med.. 2020: 1-8.](#)
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.](#)

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:
<https://www.bio-rad-antibodies.com/SDS/MCA500PE>
20487

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 \(BUF041B\)](#)

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