

# Datasheet: MCA609GT

**BATCH NUMBER 171589**

|                      |                          |
|----------------------|--------------------------|
| <b>Description:</b>  | RAT ANTI MOUSE CD8 ALPHA |
| <b>Specificity:</b>  | CD8 ALPHA                |
| <b>Other names:</b>  | LY-2                     |
| <b>Format:</b>       | Purified                 |
| <b>Product Type:</b> | Monoclonal Antibody      |
| <b>Clone:</b>        | KT15                     |
| <b>Isotype:</b>      | IgG2a                    |
| <b>Quantity:</b>     | 25 µg                    |

## 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               | ▪   |    |                | 1/50 - 1/100       |
| Immunohistology - Frozen (1) | ▪   |    |                |                    |
| Immunohistology - Paraffin   |     | ▪  |                |                    |
| ELISA                        |     |    | ▪              |                    |
| Immunoprecipitation          |     |    | ▪              |                    |
| Western Blotting             |     |    | ▪              |                    |
| Immunofluorescence           | ▪   |    |                |                    |
| Functional Assays            |     |    | ▪              |                    |

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 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Immunogen</b>                      | T cell clone, C6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>External Database Links</b>        | <p><b>UniProt:</b><br/> <a href="#">P01731</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <a href="#">12525</a>   Cd8a   <a href="#">Related reagents</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Synonyms</b>                       | Lyt2, Lyt-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>RRID</b>                           | AB_1102371                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <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 CD8α, clone KT15</b>, recognizes the <a href="#">alpha chain of mouse CD8</a>. CD8 is a heterodimeric protein composed of disulphide-linked CD8α and <a href="#">CD8β</a> chains that is expressed primarily on cytotoxic T-cells. CD8 functions in the interaction with MHC Class I-bearing targets and plays a role in T-cell-mediated killing (<a href="#">Nakauchi, H. et al., 1985</a> &amp; <a href="#">Nakauchi, H. et al., 1987</a>).</p> <p>Clone KT15 is reported to block T-cell-mediated cytotoxicity in <i>in vitro</i> assays (<a href="#">Zeis, M. et al., 2002</a>).</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. &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>2. Whiteland, J.L. et al. (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> <li>3. Lee, Y.L. et al (2003) Oral administration of Agaricus blazei (H1 strain) inhibited tumor growth in a sarcoma 180 inoculation model. <a href="#">Exp Anim. 52: 371-5.</a></li> <li>4. Eller, K. et al. (2011) IL-9 production by regulatory T cells recruits mast cells that are essential for regulatory T cell-induced immune suppression. <a href="#">J Immunol. 186: 83-91.</a></li> <li>5. Grimm, M. et al. (2010) Evaluation of immunological escape mechanisms in a mouse</li> </ol> |

- model of colorectal liver metastases. [BMC Cancer. 10: 82.](#)
6. Liao, D. *et al.* (2009) Cancer Associated Fibroblasts Promote Tumor Growth and Metastasis by Modulating the Tumor Immune Microenvironment in a 4T1 Murine Breast Cancer Model [PLoS One. 4: e7965.](#)
  7. Moos, M.P. *et al.* (2005) The lamina adventitia is the major site of immune cell accumulation in standard chow-fed apolipoprotein E-deficient mice. [Arterioscler Thromb Vasc Biol. 25: 2386-91.](#)
  8. Stevenson, P.G. *et al.* (2002) Uncoupling of virus-induced inflammation and anti-viral immunity in the brain parenchyma. [J Gen Virol. 83: 1735-43.](#)
  9. Wang, X. *et al.* (2011) Quercetin and Bornyl Acetate Regulate T-Lymphocyte Subsets and INF- $\gamma$ /IL-4 Ratio In Utero in Pregnant Mice. [Evid Based Complement Alternat Med. 2011: 745262.](#)
  10. Zeis, M. *et al.* (2002) Idiotypic protein-pulsed dendritic cells produce strong anti-myeloma effects after syngeneic stem cell transplantation in mice. [Bone Marrow Transplant. 29: 213-21.](#)
  11. Ideguchi, M. *et al.* (2008) Immune or inflammatory response by the host brain suppresses neuronal differentiation of transplanted ES cell-derived neural precursor cells. [J Neurosci Res. 86: 1936-43.](#)
  12. Wolf, D. *et al.* (2005) CD4+CD25+ regulatory T cells inhibit experimental anti-glomerular basement membrane glomerulonephritis in mice. [J Am Soc Nephrol. 16: 1360-70.](#)
  13. Severinova, 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. Zaini, J. *et al.* (2007) OX40 ligand expressed by DCs costimulates NKT and CD4+ Th cell antitumor immunity in mice. [J Clin Invest. 117: 3330-8.](#)
  15. Meyer, C. *et al.* (2011) Chronic inflammation promotes myeloid-derived suppressor cell activation blocking antitumor immunity in transgenic mouse melanoma model. [Proc Natl Acad Sci U S A. 108: 17111-6.](#)
  16. Zitt, E. *et al.* (2011) The selective mineralocorticoid receptor antagonist eplerenone is protective in mild anti-GBM glomerulonephritis. [Int J Clin Exp Pathol. 4:606-15.](#)
  17. Singh, V. *et al.* (2011) Co-administration of IL-1+IL-6+TNF- $\alpha$  with Mycobacterium tuberculosis infected macrophages vaccine induces better protective T cell memory than BCG. [PLoS One. 6: e16097.](#)
  18. Kalyanasundaram Bhanumathy, K. *et al.* (2015) Potent immunotherapy against well-established thymoma using adoptively transferred transgene IL-6-engineered dendritic cell-stimulated CD8(+) T-cells with prolonged survival and enhanced cytotoxicity. [J Gene Med. 17 \(8-9\): 153-60.](#)
  19. Abiko K *et al.* (2015) IFN- $\gamma$  from lymphocytes induces PD-L1 expression and promotes progression of ovarian cancer. [Br J Cancer. 112 \(9\): 1501-9.](#)
  20. Phan-Lai, V. *et al.* (2016) The Antitumor Efficacy of IL2/IL21-Cultured Polyfunctional Neu-Specific T Cells Is TNF $\alpha$ /IL17 Dependent. [Clin Cancer Res. 22 \(9\): 2207-16.](#)
  21. Kajiwar, T. *et al.* (2016) Hypoxia augments MHC class I antigen presentation via facilitation of ERO1- $\alpha$ -mediated oxidative folding in murine tumor cells. [Eur J Immunol. 46 \(12\): 2842-51.](#)
  22. Srivastava, A.K. *et al.* (2016) Co-transplantation of syngeneic mesenchymal stem cells improves survival of allogeneic glial-restricted precursors in mouse brain. [Exp Neurol. 275](#)

[Pt 1: 154-61.](#)

23. Meier, R.P. *et al.* (2014) Survival of free and encapsulated human and rat islet xenografts transplanted into the mouse bone marrow. [PLoS One. 9 \(3\): e91268.](#)
24. Groh, J. *et al.* (2021) Immune modulation attenuates infantile neuronal ceroid lipofuscinosis in mice before and after disease onset [Brain Communications. 3\(2\): fcab047.](#)
25. Cecil, D.L. *et al.* (2022) COX-2 inhibitors decrease expression of PD-L1 in colon tumors and increase the influx of Type I tumor infiltrating lymphocytes. [Cancer Prev Res \(Phila\). canprevres.0227.2021.](#)
26. Karikari, A.A. *et al.* (2022) Neurodegeneration by  $\alpha$ -synuclein-specific T cells in AAV-A53T- $\alpha$ -synuclein Parkinson's disease mice. [Brain Behav Immun. 101: 194-210.](#)
27. Badr, M. *et al.* (2022) Expansion of regulatory T cells by CD28 superagonistic antibodies attenuates neurodegeneration in A53T- $\alpha$ -synuclein Parkinson's disease mice. [J Neuroinflammation. 19 \(1\): 319.](#)
28. McFleder, R.L. *et al.* (2023) Brain-to-gut trafficking of alpha-synuclein by CD11c(+) cells in a mouse model of Parkinson's disease. [Nat Commun. 14 \(1\): 7529.](#)
29. Aloui, A. *et al.* (2023) AFM<sub>1</sub> Exposure in Male Balb/c Mice and Intervention Strategies Against Its Immuno-physiological toxicity using Clay Mineral and Lactic Acid Bacteria Alone or in Combination. [Immunopharmacol Immunotoxicol. : 1-32.](#)
30. Aringer, I. *et al.* (2021) Agonism of Prostaglandin E2 Receptor 4 Ameliorates Tubulointerstitial Injury in Nephrotoxic Serum Nephritis in Mice. [J Clin Med. 10 \(4\) :832.](#)

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|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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> | Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA609GT">https://www.bio-rad-antibodies.com/SDS/MCA609GT</a>                                                                                                                                                                                                                          |
| <b>Regulatory</b>                    | For research purposes only                                                                                                                                                                                                                                                                                                                                                                          |

## Related Products

### Recommended Secondary Antibodies

|                                                |                                                                                         |
|------------------------------------------------|-----------------------------------------------------------------------------------------|
| Rabbit Anti Rat IgG (STAR16...)                | <a href="#">DyLight®800</a>                                                             |
| Rabbit Anti Rat IgG (STAR17...)                | <a href="#">FITC</a>                                                                    |
| Goat Anti Rat IgG (STAR69...)                  | <a href="#">FITC</a>                                                                    |
| Goat Anti Rat IgG (STAR73...)                  | <a href="#">RPE</a>                                                                     |
| Rabbit Anti Rat IgG (STAR21...)                | <a href="#">HRP</a>                                                                     |
| Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) | <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a> |
| Goat Anti Rat IgG (STAR131...)                 | <a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>                                     |
| Goat Anti Rat IgG (STAR72...)                  | <a href="#">HRP</a>                                                                     |

## Recommended Negative Controls

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

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](http://bio-rad-antibodies.com/datasheets)  
'M382923:210513'

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