

## Datasheet: MCA2694F

<b>Description:</b>	RAT ANTI MOUSE CD8 ALPHA:FITC
<b>Specificity:</b>	CD8 ALPHA
<b>Other names:</b>	LY-2
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	53-6.7
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.1 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	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Mouse						
<b>Product Form</b>	Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid						
<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>FITC</td> <td>490</td> <td>525</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	FITC	490	525
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
FITC	490	525					
<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>	<0.1% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin						
<b>Approx. Protein Concentrations</b>	IgG concentration 0.5mg/ml						

**Immunogen** Mouse thymus or spleen.

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**External Database**

**Links**

**UniProt:**

[P01731](#) [Related reagents](#)

**Entrez Gene:**

[12525](#) Cd8a [Related reagents](#)

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**Synonyms**

Lyt2, Lyt-2

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**RRID**

AB\_905990

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**Specificity**

**Rat anti Mouse CD8 alpha antibody, clone 53-6.7** detects mouse CD8a, also known as Lyt-2. CD8 $\alpha$  is the alpha chain of the CD8 antigen. CD8 is expressed on T-cells, and exists either a homodimer composed of two alpha chains, or a heterodimer composed of one alpha and one beta chain.

CD8 functions as a co-receptor with the T-cell receptor and mediates efficient cell to cell interactions within the immune system. The CD8 alpha chain specifically binds to class I MHC molecules.

Rat anti Mouse CD8 alpha antibody, clone 53-6.7 has been reported to block antigen presentation via MHC class I and inhibit T cell responses to IL-2. Rat anti Mouse CD8 alpha antibody, clone 53-6.7 has also been used for depletion of CD8a<sup>+</sup> cells.

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**Flow Cytometry**

Use 10ul of the suggested working dilution to label 1x10<sup>6</sup> cells in 100ul.

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](#)).

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**References**

1. Takahashi, K. *et al.* (1992) CD4 and CD8 regulate interleukin 2 responses of T cells. [Proc Natl Acad Sci U S A. 89 \(12\): 5557-61.](#)
  2. Shore, D.A. *et al.* (2008) The crystal structure of CD8 in complex with YTS156.7.7 Fab and interaction with other CD8 antibodies define the binding mode of CD8 alphabeta to MHC class I. [J Mol Biol. 384 \(5\): 1190-202.](#)
  3. McDole, J.R. *et al.* (2010) Rapid formation of extended processes and engagement of Theiler's virus-infected neurons by CNS-infiltrating CD8 T cells. [Am J Pathol. 177 \(4\): 1823-33.](#)
  4. Zhang, M.Z. *et al.* (2015) Inhibition of cyclooxygenase-2 in hematopoietic cells results in salt-sensitive hypertension. [J Clin Invest. 125 \(11\): 4281-94.](#)
  5. Johnson, H.L. *et al.* (2014) Perforin competent CD8 T cells are sufficient to cause immune-mediated blood-brain barrier disruption. [PLoS One. 9 \(10\): e111401.](#)
  6. Schuster, C. *et al.* (2013) A missing PD-L1/PD-1 coinhibition regulates diabetes induction by preproinsulin-specific CD8 T-cells in an epitope-specific manner. [PLoS One. 8 \(8\): e71746.](#)
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**Further Reading**

1. Jabbari, A. & Harty, J.T. (2006) The generation and modulation of antigen-specific

memory CD8 T cell responses. [J Leukoc Biol. 80 \(1\): 16-23.](#)

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**Storage** 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.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:FITC \(MCA1212F\)](#)

### Recommended Useful Reagents

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

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

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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)

'M390161:210825'

**Printed on 29 Aug 2021**

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