

## Datasheet: MCA2690T

<b>Description:</b>	HAMSTER ANTI MOUSE CD3
<b>Specificity:</b>	CD3
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	145-2C11
<b>Isotype:</b>	IgG
<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	▪			1/25 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			
Immunofluorescence	▪			
Functional Assays			▪	

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 - 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 (NaN <sub>3</sub> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	H-2K <sup>b</sup> - specific mouse cytotoxic T lymphocyte clone BM10-37.

**External Database  
Links**

**UniProt:**

[P22646](#)   [Related reagents](#)

**Entrez Gene:**

[12501](#)   Cd3e   [Related reagents](#)

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**Fusion Partners**

Spleen cells from hyperimmunized Armenian hamsters (*Cricetulus migratorius*) were fused with cells of the murine SP2/0 myeloma.

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**Specificity**

**Hamster anti Mouse CD3 antibody, clone 145-2C11** detects CD3 epsilon (CD3 $\epsilon$ ), a ~20 kDa transmembrane protein also known as CD3 or T3. CD3 $\epsilon$  is a member of the CD3 complex which consists of four subunits, gamma, delta, epsilon and zeta, and these are associated to the T cell receptor (TCR). TCR plays a critical role in T cell development and function, and is responsible for ligand recognition. It interacts non-covalently with the CD3 dimers delta/epsilon, gamma/epsilon and zeta/zeta which transduce signals from the TCR into the cell.

CD3 $\epsilon$  is primarily expressed on T cells, NK-T cells, and at different levels on thymocytes during T cell differentiation.

Hamster anti Mouse CD3 antibody, clone 145-2C11 is useful for *in vitro* blocking and activation assays, as well as apoptosis induction and *in vitro* T cell depletions.

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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. Leo, O. *et al.* (1987) Identification of a monoclonal antibody specific for a murine T3 polypeptide. [Proc Natl Acad Sci U S A. 84 \(5\): 1374-8.](#)
2. Payer, E. *et al.* (1991) Circulating CD3+/T cell receptor V  $\gamma$  3+ fetal murine thymocytes home to the skin and give rise to proliferating dendritic epidermal T cells. [J Immunol. 146 \(8\): 2536-43.](#)
3. Salvadori, S. *et al.* (1994) Abnormal signal transduction by T cells of mice with parental tumors is not seen in mice bearing IL-2-secreting tumors. [J Immunol. 153 \(11\): 5176-82.](#)
4. Podd BS *et al.* (2006) T cells in cryptopatch aggregates share TCR  $\gamma$  variable region junctional sequences with  $\gamma\delta$  T cells in the small intestinal epithelium of mice. [J Immunol. 176 \(11\): 6532-42.](#)
5. McDole JR *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.](#)
6. Lees, C.W. *et al.* (2008) Analysis of germline GLI1 variation implicates hedgehog signalling in the regulation of intestinal inflammatory pathways. [PLoS Med. 5: e239.](#)
7. Klemann, C. *et al.* (2015) Interleukin-17, Produced by  $\gamma\delta$ -T Cells, Contributes to Hepatic Inflammation in a Mouse Model of Biliary Atresia and is Increased in Livers of Patients. [Gastroenterology. pii: S0016-5085\(15\)01352-9.](#)
8. Parang, B. *et al.* (2016) Myeloid translocation genes differentially regulate colorectal cancer programs. [Oncogene. 35 \(49\): 6341-9.](#)
9. Schuhmann, M.K. *et al.* (2017) Blocking of platelet glycoprotein receptor Ib reduces "thrombo-inflammation" in mice with acute ischemic stroke. [J Neuroinflammation. 14 \(1\): 18.](#)
10. Yu, Y. *et al.* (2017) Conventional alpha beta ( $\alpha\beta$ ) T cells do not contribute to acute intestinal ischemia-reperfusion injury in mice. [PLoS One. 12 \(7\): e0181326.](#)
11. Certo, M. *et al.* (2015) Activation of RXR/PPAR $\gamma$  underlies neuroprotection by bexarotene in ischemic stroke. [Pharmacol Res. 102: 298-307.](#)
12. Perrotta, M. *et al.* (2018) Deoxycorticosterone acetate-salt hypertension activates placental growth factor in the spleen to couple sympathetic drive and immune system activation. [Cardiovasc](#)

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<b>Storage</b>	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. 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.
<b>Shelf Life</b>	18 months from date of despatch.
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...) [DyLight®549](#), [DyLight®649](#), [DyLight®800](#),  
[FITC](#)

Goat Anti Hamster IgG (STAR79...) [Biotin](#), [FITC](#), [HRP](#)

### Recommended Negative Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL \(MCA2356\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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