

## Datasheet: MCA772

**BATCH NUMBER 165251**

<b>Description:</b>	MOUSE ANTI RAT CD3
<b>Specificity:</b>	CD3
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	1F4
<b>Isotype:</b>	IgM
<b>Quantity:</b>	0.2 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	▪			1/10 - 1/25
Immunohistology - Frozen	▪			1/10 - 1/25
Immunohistology - Paraffin (1)	▪			1/10
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	

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) **This clone is suitable for use on paraffin embedded material using target unmasking fluid [HIS003B](#), refer to [McKechnie N.M. et al.](#) for details.**

<b>Target Species</b>	Rat
<b>Product Form</b>	Purified IgM - liquid
<b>Preparation</b>	Purified IgM prepared by ammonium sulphate precipitation from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide

<b>Approx. Protein Concentrations</b>	IgM concentration 1.0 mg/ml
<b>Immunogen</b>	F344 rat T cells stimulated with PMA (TPA) and calcium ionophore
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P19377</a>      <a href="#">Related reagents</a></p> <p><a href="#">Q64159</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">25710</a>      Cd3d      <a href="#">Related reagents</a></p> <p><a href="#">300678</a>      Cd3g      <a href="#">Related reagents</a></p>
<b>Synonyms</b>	T3d
<b>RRID</b>	AB_321258
<b>Fusion Partners</b>	Spleen cells from immunized BALB/c mice were fused with cells of the P3-X63-Ag8.653 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Rat CD3 antibody, clone 1F4</b> recognizes rat CD3, a ~25 kDa antigen which is found on rat T-cells. Mouse anti Rat CD3, clone 1F4 does not react with rat B cells. In immunohistology it stains rat thymus tissues strongly in the medulla and weakly in the cortex.</p> <p>Functionally the addition of the antibody to a culture of rat T cells induces the proliferation of T-cells in the presence of PMA.</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. Nicolls, M.G. <i>et al.</i> (1992) Induction of long-term specific tolerance to allografts in rats by therapy with an anti-CD3-like monoclonal antibody. <a href="#">Transplantation 55: 459-68.</a></li> <li>2. McKechnie NM <i>et al.</i> (1997) Immunization with the cross-reactive antigens Ov39 from <i>Onchocerca volvulus</i> and hr44 from human retinal tissue induces ocular pathology and activates retinal microglia. <a href="#">J Infect Dis. 176 (5): 1334-43.</a></li> <li>3. Candolfi, M. <i>et al.</i> (2007) Intracranial glioblastoma models in preclinical neuro-oncology: neuropathological characterization and tumor progression. <a href="#">J Neurooncol. 85: 133-48.</a></li> <li>4. Lohwasser, C. <i>et al.</i> (2009) Role of the receptor for advanced glycation end products in hepatic fibrosis. <a href="#">World J Gastroenterol. 15: 5789-98.</a></li> <li>5. Sanchez-Guajardo, V. <i>et al.</i> (2010) Microglia acquire distinct activation profiles depending on the degree of alpha-synuclein neuropathology in a rAAV based model of Parkinson's disease. <a href="#">PLoS One. 5: e8784.</a></li> <li>6. Beck, K.D. <i>et al.</i> (2010) Quantitative analysis of cellular inflammation after traumatic spinal cord injury: evidence for a multiphasic inflammatory response in the acute to chronic environment. <a href="#">Brain. 133: 433-47.</a></li> <li>7. Echeverry, S. <i>et al.</i> (2011) Peripheral Nerve Injury Alters Blood-Spinal Cord Barrier Functional and Molecular Integrity through a Selective Inflammatory Pathway. <a href="#">J Neurosci.</a></li> </ol>

[31: 10819-28.](#)

8. Takahashi, Y. *et al.* (2017) Rituximab protects podocytes and exerts anti-proteinuric effects in rat adriamycin-induced nephropathy independent of B-lymphocytes. [Nephrology \(Carlton\). 22 \(1\): 49-57.](#)

9. Sun, J. *et al.* (2017) Pentapeptide PLNPK ameliorates adjuvant arthritis and inhibits T cell activation by suppressing Lck and PI3K activities [Int J Clin Exp Pathol 10\(5\): 5252-62.](#)

10. Du, K. *et al.* (2023) Pathogenesis of selective damage of granule cell layer in cerebellum of rats exposed to methylmercury [J Toxicolog Sci. 48 \(7\): 429-39.](#)

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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.

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**Guarantee**

12 months from date of despatch

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA772>  
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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgM (STAR138...) [Alk. Phos.](#)

Human Anti Mouse IgM (HCA040...) [FITC](#), [HRP](#)

Goat Anti Mouse IgM (102001...) [HRP](#)

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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://www.bio-rad-antibodies.com/datasheets)

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