

## Datasheet: MCA1477F

**BATCH NUMBER 1608**

<b>Description:</b>	RAT ANTI HUMAN CD3:FITC
<b>Specificity:</b>	CD3
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CD3-12
<b>Isotype:</b>	IgG1
<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 (1)	▪			1/5 - 1/10

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 systems with appropriate negative/positive controls.

**(1)Membrane permeabilization is required for this application. Bio-Rad recommends the use of Leucoperm (BUF09) for this purpose.**

### Target Species

Human

### Species Cross Reactivity

Reacts with: Bovine, Dog, Horse, Rhesus Monkey, Pig, Chicken, Mouse, Duck, Koala, Harbour Porpoise, Alpaca, Cynomolgus monkey, Spotted Hyena, Sea Lion, Cat, Amazon Parrot, Raccoon, Great horned owl (*Bubo virginianus*), Bullfrog, Xenopus, Rabbit  
Based on sequence similarity, is expected to react with:Mammals, Birds, Amphibia  
**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

### Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em	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</b>	0.09% Sodium Azide
<b>Stabilisers</b>	1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 mg/ml
<b>Immunogen</b>	Synthetic peptide sequence derived from cytoplasmic epitope of CD3 (Glu-Arg-Pro-Pro-Pro-Val-Pro-Asn-Pro-Asp-Tyr-Glu-Pro-Cys) (ERPPPVPNPDYEPC )
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P07766</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">916</a>    CD3E    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	T3E
<b>Specificity</b>	<p><b>Rat anti Human CD3, clone CD3-12</b> raised against a peptide representing an invariant cytoplasmic sequence within the CD3<math>\epsilon</math> chain recognizes human CD3<math>\epsilon</math>. CD3 is a multimeric protein complex composed of four distinct polypeptide chains (<math>\epsilon</math>, <math>\gamma</math>, <math>\delta</math>, <math>\zeta</math>) that assemble and function as three pairs of dimers (<math>\epsilon\gamma</math>, <math>\epsilon\delta</math>, <math>\zeta\zeta</math>). The CD3 complex serves as a T cell co-receptor that associates non-covalently with the T cell receptor (TCR) (<a href="#">Malissen 2008</a>; <a href="#">Guy and Vignali 2009</a>; <a href="#">Smith-Garvin et al. 2009</a>). CD3 is a defining feature of cells belonging to the T cell lineage and can therefore be used as T cell marker.</p> <p>As Rat anti Human CD3, clone CD3-12 has been specifically raised against an epitope within the epsilon peptide chain, highly conserved among species clone CD3-12 has a very broad species crossreactivity for the CD3 marker. (<a href="#">Jones et al. 1993</a>; <a href="#">Kothlow et al. 2005</a>).</p>
<b>References</b>	<ol style="list-style-type: none"> <li>Jones, M. <i>et al.</i> (1993) Detection of T and B cells in many animal species using cross-reactive anti-peptide antibodies. <a href="#">J Immunol. 150 (12): 5429-35.</a></li> <li>Shulga-Morskaya, S. <i>et al.</i> (2004) B cell-activating factor belonging to the TNF family acts through separate receptors to support B cell survival and T cell-independent antibody formation. <a href="#">J Immunol. 173 (4): 2331-41.</a></li> <li>Kapturczak, M.H. <i>et al.</i> (2004) Heme oxygenase-1 modulates early inflammatory responses: evidence from the heme oxygenase-1-deficient mouse. <a href="#">Am J Pathol. 165 (3): 1045-53.</a></li> <li>Kothlow, S. <i>et al.</i> (2005) Characterization of duck leucocytes by monoclonal antibodies. <a href="#">Dev Comp Immunol. 29 (8): 733-48.</a></li> <li>Patole, P.S. <i>et al.</i> (2006) Expression and regulation of Toll-like receptors in lupus-like immune complex glomerulonephritis of MRL-Fas(lpr) mice. <a href="#">Nephrol Dial Transplant 21</a></li> </ol>

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**Further Reading**

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee**

18 months from date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1477F>  
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**Regulatory**

For research purposes only

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## Related Products

### Recommended Negative Controls

[RAT IgG1 NEGATIVE CONTROL:FITC \(MCA6004F\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

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