Datasheet: MCA1477A488

**Product Details**

**Description:** RAT ANTI HUMAN CD3:Alexa Fluor®488

**Specificity:** CD3

**Format:** ALEXA FLUOR® 488

**Product Type:** Monoclonal Antibody

**Clone:** CD3-12

**Isotype:** IgG1

**Quantity:** 100 TESTS/1ml

**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).

<table>
<thead>
<tr>
<th>Applications</th>
<th>Yes</th>
<th>No</th>
<th>Not Determined</th>
<th>Suggested Dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cytometry (1)</td>
<td>-</td>
<td></td>
<td></td>
<td>1/5 - 1/10</td>
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</tbody>
</table>

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.

(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.

**Product Form**

Purified IgG conjugated to Alexa Fluor 488 - liquid

**Max Ex/Em**

<table>
<thead>
<tr>
<th>Fluorophore</th>
<th>Excitation Max (nm)</th>
<th>Emission Max (nm)</th>
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</thead>
<tbody>
<tr>
<td>Alexa Fluor®488</td>
<td>495</td>
<td>519</td>
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</tbody>
</table>

**Preparation**

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

**Buffer Solution**

Phosphate buffered saline

**Preservative Stabilisers**

0.09% Sodium Azide (NaN₃) 1% Bovine Serum Albumin

**Approx. Protein Concentrations**

IgG concentration 0.05 mg/ml
Immunogen

Synthetic peptide sequence derived from cytoplasmic epitope of CD3 (Glu-Arg-Pro-Pro-Val-Pro-Asn-Pro-Asp-Tyr-Glu-Pro-Cys) (ERPPPVPNPDEYPC)

External Database Links

UniProt: P07766 Related reagents

Entrez Gene: 916 CD3E Related reagents

Synonyms

T3E

Specificity

Rat anti Human CD3, clone CD3-12 raised against a peptide representing an invariant cytoplasmic sequence within the CD3ε chain recognizes human CD3ε. CD3 is a multimeric protein complex composed of four distinct polypeptide chains (ε, γ, δ, ζ) that assemble and function as three pairs of dimers (εγ, εδ, ζζ). The CD3 complex serves as a T cell co-receptor that associates non-covalently with the T cell receptor (TCR) (Malissen 2008; Guy and Vignali 2009; Smith-Garvin et al. 2009). CD3 is a defining feature of cells belonging to the T cell lineage and can therefore be used as T cell marker.

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. (Jones et al. 1993; Kothlow et al. 2005).

References

26. Dewals B.G., et al. (2011) Malignant catarrhal fever induced by Alcelaphine herpesvirus 1 is characterized by an expansion of activated CD3+CD8+CD4- T cells expressing a cytotoxic phenotype in both lymphoid and non-lymphoid tissues Vet Res. 42:95.

Further Reading

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.

Shelf Life
18 months from date of despatch.

Acknowledgements
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Health And Safety Information

Regulatory
For research purposes only

Related Products
Recommended Negative Controls

RAT IgG1 NEGATIVE CONTROL: Alexa Fluor® 488 (MCA6004A488)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)