Datasheet: MCA1477T
BATCH NUMBER 158825

Product Details

<table>
<thead>
<tr>
<th>Description:</th>
<th>RAT ANTI HUMAN CD3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity:</td>
<td>CD3</td>
</tr>
<tr>
<td>Format:</td>
<td>Purified</td>
</tr>
<tr>
<td>Product Type:</td>
<td>Monoclonal Antibody</td>
</tr>
<tr>
<td>Clone:</td>
<td>CD3-12</td>
</tr>
<tr>
<td>Isotype:</td>
<td>IgG1</td>
</tr>
<tr>
<td>Quantity:</td>
<td>25 µg</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Application</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>1/50 - 1/100</td>
</tr>
<tr>
<td>Immunohistology - Frozen</td>
<td>✔</td>
<td></td>
<td></td>
<td>1/100</td>
</tr>
<tr>
<td>Immunohistology - Paraffin (2)</td>
<td>✔</td>
<td></td>
<td></td>
<td>1/100</td>
</tr>
<tr>
<td>Immunofluorescence</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody 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.

2) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Tris/EDTA buffer pH 9.0 is recommended 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, African green monkey

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
**Product Form**  
Purified IgG - liquid

**Preparation**  
Purified IgG prepared from tissue culture supernatant

**Buffer Solution**  
Phosphate buffered saline

**Preservative Stabilisers**  
0.09% Sodium Azide

**Carrier Free**  
Yes

**Approx. Protein Concentrations**  
IgG concentration 1.0 mg/ml

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

**External Database Links**

<table>
<thead>
<tr>
<th>Links</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UniProt:</td>
<td>P07766  <a href="#">Related reagents</a></td>
</tr>
<tr>
<td>Entrez Gene:</td>
<td>916  CD3E  <a href="#">Related reagents</a></td>
</tr>
</tbody>
</table>

**Synonyms**  
T3E

**RRID**  
AB_10845948

**Specificity**  
**Rat anti Human CD3 antibody, 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](#)).

**Histology Positive Control Tissue**  
Tonsil

**References**

2. Shulga-Morskaya, S. *et al.* (2004) B cell-activating factor belonging to the TNF family...
60. Datta, M. & Staszewski, O. (2021) Hdac1 and Hdac2 are essential for physiological


**Further Reading**


**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.

**Guarantee**

12 months from date of despatch

**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at:
https://www.bio-rad-antibodies.com/SDS/MCA1477T
10040

**Regulatory**

For research purposes only

**Related Products**

**Recommended Secondary Antibodies**

- Rabbit Anti Rat IgG (STAR16...) *DyLight®800*
- Rabbit Anti Rat IgG (STAR17...) *FITC*
- Goat Anti Rat IgG (STAR72...) *HRP*
- Goat Anti Rat IgG (STAR69...) *FITC*
- Goat Anti Rat IgG (STAR73...) *RPE*
- Rabbit Anti Rat IgG (STAR21...) *HRP*
- Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) *DyLight®550, DyLight®650, DyLight®800*
- Goat Anti Rat IgG (STAR131...) *Alk. Phos., Biotin*

**Recommended Negative Controls**

- RAT IgG1 NEGATIVE CONTROL (MCA6004GA)

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M383453:210513'

Printed on 20 Dec 2023

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