**Datasheet: MCA1477**

<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>0.2 mg</td>
</tr>
</tbody>
</table>

**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).

<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>1/50 - 1/100</td>
</tr>
<tr>
<td>Immunohistochemistry - Frozen</td>
<td>✗</td>
<td></td>
<td></td>
<td>1/100</td>
</tr>
<tr>
<td>Immunohistochemistry - Paraffin (2)</td>
<td>✗</td>
<td></td>
<td></td>
<td>1/100</td>
</tr>
<tr>
<td>ELISA</td>
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<td>Immunoprecipitation</td>
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<td>Western Blotting</td>
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<tr>
<td>Immunofluorescence</td>
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</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

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 by affinity chromatography on Protein G 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
**UniProt:**
- P07766
- Related reagents

**Entrez Gene:**
- 916
- CD3E
- Related reagents

## Synonyms
T3E

## RRID
AB_321245

## 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).

## Histology Positive Control Tissue
Tonsil

## 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\degree C or at -20\degree C if preferred.

This product should be stored undiluted.
Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

### Guarantee
12 months from date of despatch

### Health And Safety Information
Material Safety Datasheet documentation #10040 available at:

### Regulatory
For research purposes only

**Related Products**

**Recommended Secondary Antibodies**

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

**Recommended Negative Controls**

- RAT IgG1 NEGATIVE CONTROL (MCA6004GA)

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