Datasheet: MCA463A488

<table>
<thead>
<tr>
<th>Description</th>
<th>MOUSE ANTI HUMAN CD3: Alexa Fluor® 488</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>CD3</td>
</tr>
<tr>
<td>Format</td>
<td>ALEXA FLUOR® 488</td>
</tr>
<tr>
<td>Product Type</td>
<td>Monoclonal Antibody</td>
</tr>
<tr>
<td>Clone</td>
<td>UCHT1</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG1</td>
</tr>
<tr>
<td>Quantity</td>
<td>100 TESTS/1ml</td>
</tr>
</tbody>
</table>

**Product Details**

| RRID                          | AB_322146                              |

**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>Suggested Dilution</th>
<th>Neat - 1/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cytometry</td>
<td>Yes</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. 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.

**Target Species**

Human

**Species Cross Reactivity**

Reacts with: Chimpanzee

**Product Form**

Purified IgG conjugated to Alexa Fluor® 488 - liquid

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

1% Bovine Serum Albumin

**Approx. Protein Concentrations**

IgG concentration 0.05 mg/ml

**Immunogen**

Human infant thymocytes and lymphocytes from a patient with Sezary Syndrome.
Mouse anti Human CD3 antibody, clone UCHT1 recognizes the human T-cell surface glycoprotein CD3 epsilon chain, also known as T-cell surface antigen T3/Leu-4 epsilon chain or CD3ε. CD3ε is a 207 amino acid, ~21kDa single pass type 1 transmembrane protein containing a single Ig-like and a single ITAM domain. Mouse anti Human CD3 antibody, clone UCHT1 was originally described as only binding to CD3ε when complexed with either the CD3δ or CD3γ subunits, as indicated by co-transfection immunofluorescence studies on COS cells (Salmerón et al. 1991). Mouse anti Human CD3 antibody, clone UCHT1 binds to a region in the ectodomain of human CD3ε and has been shown to bind to a discontinuous epitope near an acidic region of CD3ε opposite the dimer interface; as shown by crystallographic studies of the CD3ε/δ dimer complexed with a single chain UCHT1 antibody fragment (Arnett et al. 2004).

CD3 is expressed by all T lymphocytes and is seen in all lymphoid organs including lymph nodes and spleen. It is involved in thymocyte differentiation (Brodeur et al. 2009). Deficiency of the CD3ε chain contributes to blocking T-cell development and presentation of a severe combined immunodeficiency phenotype (Fischer et al. 2005).

Mouse anti Human CD3 antibody, clone UCHT1 has been used successfully for the activation of human peripheral blood lymphocytes by cross linking and subsequently for CD3ε surface expression by flow cytometry (Hirsh and Cohen 2006).

References
10. McIntosh, R.S. et al. (1997) Analysis of the T cell receptor V alpha repertoire in Hashimoto’s thyroiditis: evidence for the restricted accumulation of CD8+ T cells in the absence of CD4+ T cell restriction. *J Clin Endocrinol Metab. 82: 1140-6.*

**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.

**Guarantee**

18 months from date of despatch.

**Acknowledgements**

This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com

**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at:


**Regulatory**

For research purposes only

**Related Products**

**Recommended Negative Controls**

**Recommended Useful Reagents**

**HUMAN SEROBLOCK (BUF070A)**
**HUMAN SEROBLOCK (BUF070B)**

**North & South America**
Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

**Worldwide**
Tel: +44 (0)1865 852 700
Fax: +44 (0)1865 852 739
Email: antibody_sales_uk@bio-rad.com

**Europe**
Tel: +49 (0) 89 8090 95 21
Fax: +49 (0) 89 8090 95 50
Email: antibody_sales_de@bio-rad.com

"M342189:190110"

Printed on 15 Mar 2019