

Datasheet: MCA463F

BATCH NUMBER 161960

Description:	MOUSE ANTI HUMAN CD3:FITC
Specificity:	CD3
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	UCHT1
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			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 system using appropriate negative/positive controls.

Target Species	Human		
Species Cross Reactivity	Reacts with: Chimpanzee 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
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		

Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Human infant thymocytes and lymphocytes from a patient with Sezary Syndrome.
External Database Links	<p>UniProt: P07766 Related reagents</p> <p>Entrez Gene: 916 CD3E Related reagents</p>
Synonyms	T3E
RRID	AB_321249
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the P3/NS1/1-Ag4-1 mouse myeloma cell line.
Specificity	<p>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 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 binds to a discontinuous epitope near an acidic region of CD3ε opposite the dimer interface; as shown by crystallography of the CD3ε/δ dimer complexed with a single chain UCHT1 antibody fragment (Arnett et al. 2004).</p> <p>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).</p> <p>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).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells or cells or 100ul whole blood.
References	1. Beverley, P.C. & Callard, R.E. (1981) Distinctive functional characteristics of human "T" lymphocytes defined by E rosetting or a monoclonal anti-T cell antibody. Eur J Immunol. 11 (4): 329-34.

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Further Reading	<ol style="list-style-type: none"> 1. Clevers, H. <i>et al.</i> (1988) The T cell receptor/CD3 complex: a dynamic protein ensemble. Annu Rev Immunol. 6: 629-62. 2. Arnett, K.L. <i>et al.</i> (2004) Crystal structure of a human CD3-epsilon/delta dimer in complex with a UCHT1 single-chain antibody fragment. Proc Natl Acad Sci U S A. 101: 16268-73.
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Storage	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p>
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Guarantee	12 months from date of despatch
Health And Safety Information	<p>Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA463F</p> <p>10041</p>
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

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
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'M385851:210513'

Printed on 08 Mar 2024

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