

Datasheet: MCA463C BATCH NUMBER 163686

Description:	MOUSE ANTI HUMAN CD3:RPE-Cy5		
Specificity:	CD3		
Format:	RPE-CY5		
Product Type:	Monoclonal Antibody		
Clone:	UCHT1		
Isotype:	lgG1		
Quantity:	100 TESTS/1ml		

Product Details

Applications	This product has been reported to work in the following applications. This information is					
	derived from testing w	ithin our laborate	ories,	peer-reviewed publi	ications or personal	
	communications from the originators. Please refer to references indicated for furth					
	information. For gener	al protocol reco	mmen	dations, please visi	t <u>www.bio-</u>	
	rad-antibodies.com/protocols.					
		Yes N	lo	Not Determined	Suggested Dilution	
	Flow Cytometry	•			Neat	
	Where this antibody ha	as not been test	ed for	use in a particular	technique this does not	
	necessarily exclude its	s use in such pro	ocedui	res. Suggested worl	king dilutions are given as	
	a guide only. It is reco	mmended that th	he use	er titrates the antibo	dy for use in their own	
	system using appropriate negative/positive controls.					
Target Species	Human					
Species Cross	Reacts with: Chimpanzee					
Reactivity	N.B. Antibody reactivit	ty and working c	onditio	ons may vary betwe	en 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 RPE-Cy5 - liquid					
Max Ex/Em	Fluorophore	Excitation Max	(nm)	Emission Max (nm)	<u> </u>	
	RPE-Cy5 488nm laser	496		667		
Buffer Solution	Phosphate buffered sa	aline				
Preservative	<0.1% Sodium Azide ((NaN ₃)				
Stabilisers	Stabilizing agent (sucr	ose)				

External Database Links	UniProt: <u>P07766</u> <u>Related reagents</u> Entrez Gene: <u>916</u> CD3E <u>Related reagents</u>				
Synonyms	ТЗЕ				
RRID	AB_1101796				
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the P3/NS1/1-Ag4-1 mouse myeloma cell line.				
Specificity	 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 <u>Ig-like</u> and a single <u>ITAM</u> 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 <i>et al.</i> 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 <i>et al.</i> 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 <i>et al.</i> 2009). Deficiency of the CD3ε chain contributes to blocking T-cell development and presentation of a severe combined immunodeficiency phenotype (Fischer <i>et al.</i> 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 				
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells or cells or 100ul whole blood				
References	 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. <u>Eur J Immunol.</u> <u>11 (4): 329-34.</u> Kung, P. <i>et al.</i> (1979) Monoclonal antibodies defining distinctive human T cell surface antigens. <u>Science. 206: 347-9.</u> Clevers, H. <i>et al.</i> (1988) The transmembrane orientation of the epsilon chain of the TcR/CD3 complex. <u>Eur J Immunol. 18 (5): 705-10.</u> Salmerón, A. <i>et al.</i> (1991) A conformational epitope expressed upon association of CD3-epsilon with either CD3-delta or CD3-gamma is the main target for recognition by 				

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Further Reading	 Clevers, H. <i>et al.</i> (1988) The T cell receptor/CD3 complex: a <u>Annu Rev Immunol. 6: 629-62.</u> Arnett, K.L. <i>et al.</i> (2004) Crystal structure of a human CD3- complex with a UCHT1 single-chain antibody fragment. <u>Proc N</u> <u>16268-73.</u> 	a dynamic protein ensemble. epsilon/delta dimer in <u>Natl Acad Sci U S A. 101:</u>
Storage	Store at +4°C. DO NOT FREEZE. This product should be stor frost free freezers is not recommended. This product is photos protected from light. Avoid repeated freezing and thawing as t antibody. Should this product contain a precipitate we recomm before use.	red undiluted. Storage in sensitive and should be his may denature the nend microcentrifugation
Guarantee	Guaranteed for 12 months from the date of despatch or until the comes first. Please see label for expiry date.	he date of expiry, whichever
Acknowledgements	Cy® and CyDye® are registered trademarks of GE Healthcare	2
Health And Safety Information	Material Safety Datasheet documentation #10045 available at https://www.bio-rad-antibodies.com/SDS/MCA463C 10045	:
Regulatory	For research purposes only	

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Recommended Useful Reagents

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