Datasheet: MCA463PECY5.5

Description:	MOUSE ANTI HUMAN CD3:RPE-Cy5.5
Specificity:	CD3
Format:	RPE-CY5.5
Product Type:	Monoclonal Antibody
Clone:	UCHT1
Isotype:	IgG1
Quantity:	100 TESTS

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	▪			Neat

Where this product 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 product 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 R. Phycoerythrin-Cy5.5 (RPE-Cy5.5) - lyophilized

Reconstitution

Reconstitute with 1.0 ml distilled water

Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE-Cy5.5 488nm laser	496	695

Preparation

Purified IgG prepared by affinity chromatography on Protein G

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin 5% Sucrose
Immunogen	Human infant thymocytes and lymphocytes from a patient with Sezary Syndrome.
External Database Links	**UniProt:** P07766 Related reagents **Entrez Gene:** 916 CD3E Related reagents
Synonyms	T3E
RRID	AB_10960846
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 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 espression by flow cytometry (Hirsh and Cohen 2006).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 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

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Storage

Prior to reconstitution store at +4^{o}C.
After reconstitution store at +4^{o}C.
DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use

Guarantee

12 months from date of despatch

Acknowledgements

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Health And Safety Information

Material Safety Datasheet documentation #10075 available at:
10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf

Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

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HUMAN SEROBLOCK (BUF070B)

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