

Datasheet: 4C004

Description:	FOUR-COLOR HUMAN CD8/CD38/CD3/HLA DR FLOW KIT
Specificity:	CD8/CD38/CD3/HLA DR
Format:	4 Color
Product Type:	Four Color Reagent
Clone:	LT8 / AT13/5 / UCHT1 / YE2/36-HLK
Isotype:	Cocktail
Quantity:	50 TESTS/0.5ml

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

Product Form Four color combination consisting of APC, FITC, RPE-Cy5.5 and RPE conjugated monoclonal antibodies mixed in optimal ratio - lyophilised.

APC conjugated CD8 (Mouse IgG1)
 FITC conjugated CD38 (Mouse IgG1)
 RPE-Cy5.5 conjugated CD3 (Mouse IgG1)
 RPE conjugated HLA DR (Rat IgG2a)

Reconstitution Reconstitute with 0.5ml distilled water

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	APC	650	661
	FITC	490	525
	RPE 488nm laser	496	578
	RPE 561nm laser	546	578
	RPE-Cy5.5 488nm laser	496	695
	RPE-Cy5.5 561nm laser	546	695

Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide (NaN ₃)
Stabilisers	1% Bovine Serum Albumin 5% Sucrose
External Database Links	<p>UniProt:</p> <p>P07766 Related reagents</p> <p>P01732 Related reagents</p> <p>P28907 Related reagents</p> <p>Entrez Gene:</p> <p>916 CD3E Related reagents</p> <p>925 CD8A Related reagents</p> <p>952 CD38 Related reagents</p>
Synonyms	MAL, T3E
Specificity	<p>Four-Color Human Flow Kit, CD8/CD38/CD3/HLA DR, clones LT8 / AT13/5 / UCHT1 / YE2/36-HLK can be used for single-step identification of human activated cytotoxic (CD3+CD8+CD38+ and CD3+CD8+HLA DR+) T-cell subsets, useful in the study of Acquired Immunodeficiency Syndrome (AIDS) and other viral infection including Epstein Barr Virus (EBV) and Cytomegalovirus (CMV).</p> <p>CD3 is a member of the immunoglobulin superfamily, which acts as a mediator of signal transduction, through association with the α/β or γ/δ T-cell receptor (TCR). Mammalian CD3 is a multimeric protein composed of four distinct polypeptide chains (ϵ, γ, δ, ζ), consisting of two heterodimers ($\epsilon\gamma$, $\epsilon\delta$) and one homodimer ($\zeta\zeta$). CD3 is expressed by a high-percentage of circulating peripheral T-cells and is considered a pan T-cell marker. Clone UCHT1 specifically recognizes the 20kDa CD3ϵ chain.</p> <p>CD8 is a cell surface glycoprotein which acts as a co-receptor for MHC Class I, in conjunction with the T-cell receptor (TCR). CD8 exists as a dimer, composed of two α chains or more commonly as an $\alpha\beta$ heterodimer. The CD8 antigen is expressed on the human cytotoxic T-cell subset (CD3+CD8+) and on a subset of NK cells. Binding of CD8 to MHC class I, acts to enhance resting T-cell activation. Clone LT8 is specific for the CD8α chain.</p> <p>CD38, otherwise known as cyclic-ADP ribose hydrolase 1, is a type II integral transmembrane glycoprotein and member of the ADP-ribosyl cyclase family, which is widely used to study the processes of B- and T-cell differentiation and activation. An increase in CD8+CD38+ T-cells is a useful indicator of disease progression in HIV infection. This same subset of activated T-cells is also increased in other active viral infections such as EBV and CMV.</p> <p>HLA DR is a heterodimeric cell surface glycoprotein and human class II MHC (major</p>

histocompatibility complex) cell surface receptor, consisting of a 36kDa alpha and 27kDa beta chain, which is essential for efficient peptide presentation to CD4+ T-cells. HLA DR is expressed primarily by antigen presenting cells and, together with CD38, is a useful marker of T-cell activation following viral infection. Clone YE2/36-HLK recognises a monomorphic determinant of human HLA DR.

Flow Cytometry Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

Storage Prior to reconstitution store at +4°C.
After reconstitution store at +4°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

Health And Safety Information Material Safety Datasheet documentation #20487 available at:
20487: <https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf>

Regulatory For research purposes only

Related Products

Recommended Useful Reagents

[ERYTHROLYSE RED BLOOD CELL LYSING BUFFER \(10x\) \(BUF04B\)](#)

[ERYTHROLYSE RED BLOOD CELL LYSING BUFFER \(10x\) \(BUF04C\)](#)

[FLOW CYTOMETRY ABSOLUTE COUNT STANDARD™ \(FCSC580\)](#)

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

North & South Tel: +1 800 265 7376

America 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

From March 15, 2021, we will no longer supply printed datasheets with our products.
Look out for updates on how to access your digital version at bio-rad-antibodies.com

'M375198:210104'

Printed on 12 Feb 2021