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 Stabilisers

0.09% Sodium Azide (NaN_3)
1% Bovine Serum Albumin
5% Sucrose

External Database Links	**UniProt:** P07766 Related reagents P01732 Related reagents P28907 Related reagents **Entrez Gene:** 916 CD3E Related reagents 925 CD8A Related reagents 952 CD38 Related reagents
Synonyms	MAL, T3E
Specificity	**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 suppressor/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). 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 (εγ, εδ) and one homodimer (ζζ). 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. 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 αβ heterodimer. The CD8 antigen is expressed on the human suppressor/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. 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. HLA DR is a heterodimeric cell surface glycoprotein and human class II MHC (major 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 1x10^6 cells in 100ul.
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.

Shelf Life	12 months from date of reconstitution.
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

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)

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