

Datasheet: 4C006

Description:	FOUR-COLOR HUMAN CD4/CD38/CD3/HLA DR FLOW KIT
Specificity:	CD4/CD38/CD3/HLA DR
Format:	4 Color
Product Type:	Four Color Reagent
Clone:	RPA-T4 / 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 CD4 (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 (NaN₃)

Stabilisers

1% Bovine Serum Albumin
 5% Sucrose

External Database Links	UniProt: P07766 Related reagents P01730 Related reagents P28907 Related reagents Entrez Gene: 916 CD3E Related reagents 920 CD4 Related reagents 952 CD38 Related reagents
Synonyms	T3E
Specificity	Four-Color Human CD4/CD38/CD3/HLA DR Flow Kit can be used for single-step identification of activated helper/inducer (CD3+CD4+CD38+ and CD3+CD4+HLA DR+) T-cell subsets. 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 ~20 kDa CD3ϵ chain. CD4 is a single chain transmembrane glycoprotein and member of the immunoglobulin superfamily, which interacts directly with class II molecules of the major histocompatibility complex (MHCII), and is the primary receptor for the human immunodeficiency virus (HIV). CD4 is expressed by the helper/inducer (CD3+CD4+) T-cell subset, the majority of thymocytes, and at low levels by monocytes and tissue macrophages. The CD4 lymphocyte count provides an excellent indication of immune system health. Clone RPA-T4 binds to the D1 domain (CDR1 and CDR3 epitopes) of the CD4 antigen. 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. Increased expression of CD38 on both CD4+ and CD8+ T-cells in HIV-infected patients is associated with disease progression. HLA DR is a heterodimeric cell surface glycoprotein and human class II MHC (major histocompatibility complex) cell surface receptor, consisting of a 36 kDa alpha and 27 kDa 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.
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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