

## Datasheet: 4C008

<b>Description:</b>	FOUR-COLOR HUMAN CD3/CD8/CD45/CD4 FLOW KIT
<b>Specificity:</b>	CD3/CD8/CD45/CD4
<b>Format:</b>	4 Color
<b>Product Type:</b>	Four Color Reagent
<b>Clone:</b>	UCHT1 / LT8 / F10-89-4 / RPA-T4
<b>Isotype:</b>	Cocktail
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Human
<b>Product Form</b>	Four color combination consisting of RPE-Cy5.5, APC, RPE and FITC conjugated monoclonal antibodies mixed in optimal ratio - lyophilised.  RPE-Cy5.5 conjugated CD3 (Mouse IgG1) APC conjugated CD8 (Mouse IgG1) RPE conjugated CD45 (Mouse IgG2a) FITC conjugated CD4 (Mouse IgG1)
<b>Reconstitution</b>	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

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P08575</a>      <a href="#">Related reagents</a></p> <p><a href="#">P07766</a>      <a href="#">Related reagents</a></p> <p><a href="#">P01732</a>      <a href="#">Related reagents</a></p> <p><a href="#">P01730</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">5788</a>    PTPRC    <a href="#">Related reagents</a></p> <p><a href="#">916</a>    CD3E    <a href="#">Related reagents</a></p> <p><a href="#">920</a>    CD4    <a href="#">Related reagents</a></p> <p><a href="#">925</a>    CD8A    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD45, MAL, T3E
<b>Specificity</b>	<p><b>Four-Color Human CD3/CD8/CD45/CD4 Flow Kit</b> can be used for single-step identification of human mature T-cells (CD3+), helper/inducer (CD3+CD4+) T-cell subsets and cytotoxic (CD3+CD8+) T-cell subsets.</p> <p>CD45 is a ~180-240kDa complex glycoprotein and member of the protein-tyrosine phosphatase family, otherwise known as leucocyte common antigen (LCA), and is expressed on all haematopoietic cells with the exception of mature erythrocytes and platelets. CD45 is a complex molecule existing in a number of isoforms including CD45RA and CD45RO. Clone F10-89-4 reacts with all isoforms.</p> <p>CD3 is a member of the immunoglobulin superfamily, which acts as a mediator of signal transduction, through association with the <math>\alpha/\beta</math> or <math>\gamma/\delta</math> T-cell receptor (TCR). Mammalian CD3 is a multimeric protein composed of four distinct polypeptide chains (<math>\epsilon</math>, <math>\gamma</math>, <math>\delta</math>, <math>\zeta</math>), consisting of two heterodimers (<math>\epsilon\gamma</math>, <math>\epsilon\delta</math>) and one homodimer (<math>\zeta\zeta</math>). 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 ~26;20kDa CD3<math>\epsilon</math> chain.</p> <p>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.</p> <p>CD8 is a cell surface glycoprotein which acts as a co-receptor for MHC Class I, in</p>

conjunction with the T-cell receptor (TCR). CD8 exists as a dimer, composed of two  $\alpha$  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 CD8 $\alpha$  chain.

<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul.
<b>Storage</b>	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.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20487 available at: 20487: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf</a>
<b>Regulatory</b>	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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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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