Datasheet: 4C004

Product Details

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

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.

<table>
<thead>
<tr>
<th>Application</th>
<th>Yes</th>
<th>No</th>
<th>Not Determined</th>
<th>Suggested Dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cytometry</td>
<td></td>
<td></td>
<td></td>
<td>Neat</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Fluorophore</th>
<th>Excitation Max (nm)</th>
<th>Emission Max (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APC</td>
<td>650</td>
<td>661</td>
</tr>
<tr>
<td>FITC</td>
<td>490</td>
<td>525</td>
</tr>
<tr>
<td>RPE 488nm laser</td>
<td>496</td>
<td>578</td>
</tr>
<tr>
<td>RPE 561nm laser</td>
<td>546</td>
<td>578</td>
</tr>
<tr>
<td>RPE-Cy5.5 488nm laser</td>
<td>496</td>
<td>695</td>
</tr>
<tr>
<td>RPE-Cy5.5 561nm laser</td>
<td>546</td>
<td>695</td>
</tr>
</tbody>
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Buffer Solution

Phosphate buffered saline

Preservative

0.09% Sodium Azide (NaN₃)

Stabilisers

1% Bovine Serum Albumin

5% Sucrose
**External Database Links**

- UniProt: [P07766](UniProt) Related reagents
- [P01732](UniProt) Related reagents
- [P28907](UniProt) Related reagents

**Entrez Gene:**

- [916](Entrez) CD3E Related reagents
- [925](Entrez) CD8A Related reagents
- [952](Entrez) 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 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 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°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 reconstitution.

Health And Safety Information
Material Safety Datasheet documentation #10075 available at:

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)