BUV496 Mouse Anti-Human CD3

**Product Information**

**Material Number:** 564809

**Alternate Name:** CD3e; CD3E; T3E; TCRE; T-cell surface antigen T3/Leu-4 epsilon

**Size:**

100 Tests

**Vol. per Test:**

5 µl

**Clone:**

UCHT1

**Immunogen:**

Human infant thymocytes and peripheral blood lymphocytes from a Sézary Syndrome donor

**Isotype:**

Mouse (BALB/c) IgG1, κ

**Reactivity:**

QC Testing: Human

**Workshop:**

III 471

**Storage Buffer:**

Aqueous buffered solution containing ≤0.09% sodium azide.

**Description**

The UCHT1 monoclonal antibody specifically binds to the human CD3ε-chain, a 20-kDa subunit of the CD3/T cell antigen receptor complex. CD3ε is expressed on 70-80% of normal human peripheral blood lymphocytes and 60-85% of thymocytes. Studies from the HLDA Workshop show that this antibody is mitogenic for CD3ε-positive cells when used in conjunction with costimulatory agents such as pokeweed mitogen or anti-CD28 antibody. CD3 plays a central role in signal transduction during antigen recognition. The UCHT1 antibody stains both surface and intracellular CD3ε unlike the other CD3 clone, HIT3a, that stains only extracellular CD3ε.

The antibody was conjugated to BD Horizon BUV496 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 496-nm. BD Horizon BUV496 can be excited by the ultraviolet laser (355 nm) and detected with a 515/30 nm filter with a 450LP. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into the channel detecting BD Horizon V500 or BV510 (eg, 525/40-nm filter). However, the spillover can be corrected through compensation as with any other dye combination.

**Flow cytometric analysis of CD3 expression on human peripheral blood lymphocytes.** Human whole blood was stained with either BD Horizon™ BUV496 Mouse IgG1, κ Isotype Control (Cat. No. 564650; dashed line histogram) or BD Horizon BUV496 Mouse Anti-Human CD3 antibody (Cat. No. 564809/564810; solid line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histogram showing CD3 expression (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD LSR™ II Flow Cytometry System.

**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon BUV496 under optimum conditions, and unconjugated antibody and free BD Horizon BUV496 were removed.

**Application Notes**

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<thead>
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<th>Application</th>
<th>Routinely Tested</th>
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<tr>
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## Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<td>564650</td>
<td>BUV496 Mouse IgG1, k Isotype Control</td>
<td>50 µg</td>
<td>X40</td>
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<tr>
<td>564810</td>
<td>BUV496 Mouse Anti-Human CD3</td>
<td>25 Tests</td>
<td>UCHT1</td>
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<td>563794</td>
<td>Brilliant Stain Buffer</td>
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<tr>
<td>349202</td>
<td>BD FACSTM Lysing Solution</td>
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<tr>
<td>555899</td>
<td>Lysing Buffer</td>
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## Product Notices
1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. BD Horizon Brilliant Ultraviolet 496 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; and 8,354,239.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

## References