Technical Data Sheet

PE Mouse Anti-Human CD3

Product Information

Material Number: 566683
Alternate Name: CD3E; CD3e; T-cell surface antigen T3/Leu-4 epsilon; T3E; TCRE
Size: 100 Tests
Vol. per Test: 5 µl
Clone: OKT3
Immunogen: Sheep Erythrocyte Rosette-purified Human T Cells
Isotype: Mouse (BALB/c x A/J, also known as CAF1) IgG2a, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The OKT3 monoclonal antibody specifically recognizes the CD3 epsilon subunit (CD3e/CD3ε) of the CD3 complex which consists of four transmembrane proteins (γ, δ, ε, ζ) that are associated with the T cell antigen receptor (TCR) to form the CD3/TCR complex. The CD3 complex associates with either TCR αβ or TCR γδ heterodimers that are alternatively expressed by some thymocytes, T cells or NKT cells. The CD3 complex is required for the cell surface expression and signal-transducing functions of the TCR. The CD3 complex is expressed by ~60-85% thymocytes and by all peripheral mature T cells. CD3e is also known as T3E or TCRE. CD3e is a ~20 kDa unglycosylated type I transmembrane protein that is encoded by CD3E which belongs to the immunoglobulin superfamily (IgSF). CD3e has an Ig-like extracellular domain (ECD) and an immunoreceptor tyrosine-based activation motif (ITAM) in its cytoplasmic domain. The OKT3 antibody can reportedly fix complement, stimulate T cell proliferation and cytokine production, and block the binding of other human CD3e-specific antibodies including UCHT1 and SK7.

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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

<table>
<thead>
<tr>
<th>Application</th>
<th>Routinely Tested</th>
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<td>Flow cytometry</td>
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566683 Rev. 1
Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<td>PE Mouse Anti-Human CD3</td>
<td>25 Tests</td>
<td>OKT3</td>
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<td>PE Mouse IgG2a, κ Isotype Control</td>
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<td>Stain Buffer (BSA)</td>
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<td>Lysing Buffer</td>
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<td>BD FACSTM Lysing Solution</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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at wwwbdbiosciences.com/colors.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Please refer to wwwbdbiosciences.com/pharmingen/protocols for technical protocols.

References


