Alexa Fluor® 647 Mouse Anti-Human Terminal Transferase (TdT)

**Product Information**

**Material Number:** 565231  
**Alternate Name:** TdT; DNTT; Terminal transferase; Terminal addition enzyme  
**Size:** 100 Tests  
**Vol. per Test:** 5 µl  
**Clone:** E17-1519  
**Immunogen:** Purified Human TdT  
**Isotype:** Mouse (BALB/c) IgG1, κ  
**Reactivity:** QC Testing: Human  
**Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The E17-1519 monoclonal antibody specifically recognizes Terminal deoxynucleotidyl transferase (TdT), which is also known as Terminal transferase, or DNA nucleotidylexotransferase (DNTT). TdT is a 60 kDa nuclear polymerase that catalyzes the template-independent addition of deoxynucleotides to the 3'-hydroxyl termini of single-stranded oligonucleotide primer segments. TdT can contribute to antigen receptor diversity by N region diversification of rearranging immunoglobulin heavy chain and T cell receptor gene segments during pre-B and pre-T cell development. It is also expressed by certain lymphomas and leukemias.

**Application Notes**

**Application**  
Intracellular staining (flow cytometry) Routinely Tested

**Recommended Assay Procedure:**

1. Harvest cultured target cells into a 50 ml conical centrifuge tube. Centrifuge at 1000 rpm for 10 minutes, aspirate and discard supernatant.  
2. Wash cell pellet once with PBS and mix gently. Centrifuge at 1000 rpm for 10 minutes, aspirate and discard supernatant.  
3. Fix the cells by adding 15-20 ml of 1% formaldehyde while vortexing the pellet and incubate for 20 minutes at room temperature. Centrifuge at 1000 rpm for 10 minutes, aspirate and discard supernatant.  
4. Add 15-20 ml of 0.1% Triton™ X-100 in PBS and incubate for 5-10 minutes. Centrifuge at 1000 rpm for 10 minutes, aspirate and discard supernatant.
5. Resuspend cells in PBS + 1% FBS (wash buffer) to a final concentration of approximately $1 \times 10^6$ cells per 50 µl.
6. Prepare one tube with 50 µl of cell suspension and add 20 µl of fluorescent Anti-Human TdT antibody. Prepare another tube with 50 µl of cell suspension and add 20 µl of a matched fluorescent Ig isotype control. Mix the tube contents gently, and incubate in the dark at room temperature for 20-30 minutes.
7. Wash cells with 2 ml of wash buffer per tube. Centrifuge for 5 minutes at 1000 rpm, aspirate and discard supernatant.
8. Resuspend cells in 500 µl of wash buffer and analyze by flow cytometry.

**Suggested Companion Products**

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<td>557732</td>
<td>Alexa Fluor® 647 Mouse IgG1 κ Isotype Control</td>
<td>100 Tests</td>
<td>MOPC-21</td>
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</table>

**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).
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Triton is a trademark of the Dow Chemical Company.
7. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
8. 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.
9. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
10. An isotype control should be used at the same concentration as the antibody of interest.

**References**


Sasaki R, Yuasa Y, Masa-yama A, Takaku F, Bollum FJ. Production of a specific monoclonal antibody to terminal deoxynucleotidyl transferase (TdT) and the extensive studies of TdT in patients with hematological malignancies. 1993; 25(4):223-225. (Biology)