BD Horizon™

Technical Data Sheet

BV510 Mouse Anti-Human Terminal Transferase (TdT)

Product Information

Material Number: 565229
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.

The antibody was conjugated to BD Horizon BV510 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon BV510 can be excited by the violet laser and detected in the BD Horizon V500 (525/50-nm) filter set. BD Horizon BV510 conjugates are useful for the detection of dim markers off the violet laser.

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™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

Application Notes

Application

Intracellular staining (flow cytometry) Routinely Tested

Recommended Assay Procedure:

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

BD Biosciences

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565229 Rev. 1
Staining Protocol:
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 x 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>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
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<td>Stain Buffer (FBS)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>562946</td>
<td>BV510 Mouse IgG1, k Isotype Control</td>
<td>50 µg</td>
<td>X40</td>
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<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</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 x 10^6 cells in a 100-µl experimental sample (a test).
3. Triton is a trademark of the Dow Chemical Company.
4. Brilliant Violet™ 510 is a trademark of Sirigen.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. An isotype control should be used at the same concentration as the antibody of interest.

References
Sasaki R, Yuasa Y, Masuyama 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)