Product Information

Material Number: 563159
Alternate Name: IL-2R; IL2RA; IL-2Rα; TCGR; TAC antigen; p55
Size: 50 Tests
Vol. per Test: 5 µl
Clone: 2A3
Immunogen: Human Phytohemagglutinin-activated T Cells
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: III A769, T153; IV A8
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 2A3 monoclonal antibody specifically binds to human CD25, the low-affinity alpha subunit of the Interleukin-2 Receptor (IL-2Rα). CD25 associates with CD122 (IL-2Rβ chain) and CD132 (common γ chain or γc) to form the high-affinity signal-transducing IL-2R complex. CD25 is expressed by a subset of peripheral blood lymphocytes including CD4+CD25+ natural regulatory T cells. CD25 antigen density increases on activated T cells including phytohemagglutinin (PHA)-, concanavalin A (Con A)-, and CD3-activated T lymphocytes. High levels of CD25 can also be expressed by T lymphocytes from mixed lymphocyte cultures and by human T-lymphocyte leukemia virus (HTLV)-infected T-lymphocyte leukemia lines, for example, HUT-102. Recombinant IL-2 blocks the binding of the 2A3 antibody to PHA-activated T lymphocytes.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. This dye is a tandem fluorochrome of BD Horizon™ BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon™ BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy™5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

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™ BV711 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV711 were removed.

Application Notes

Application

Flow cytometry Routinely Tested

Flow cytometric analysis of CD25 expression on stimulated human peripheral blood lymphocytes.

Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.
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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

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<thead>
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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>
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<tr>
<td>563044</td>
<td>BV711 Mouse IgG1, k Isotype Control</td>
<td>50 µg</td>
<td>X40</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<tr>
<td>563794</td>
<td>Brilliant Stain Buffer</td>
<td>100 Tests</td>
<td>(none)</td>
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<tr>
<td>566349</td>
<td>Brilliant Stain Buffer</td>
<td>1000 Tests</td>
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<tr>
<td>566385</td>
<td>Brilliant Stain Buffer Plus</td>
<td>1000 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 × 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. Cy is a trademark of GE Healthcare.

References
Leonard WJ, Depper JM, Uchiyama T, Smith KA, Waldmann TA, Greene WC. A monoclonal antibody that appears to recognize the receptor for human T-cell growth factor; partial characterization of the receptor. Nature. 1982; 300(5889):267-269. (Biology)
Siegel JP, Sharon M, Smith PL, Leonard WJ. The IL-2 receptor beta chain (p70): role in mediating signals for LAK, NK, and proliferative activities. Science. 1987; 238(4823):75-78. (Biology)