FITC Mouse anti-Human Granzyme B

Product Information

Material Number: 560211
Size: 100 tests
Vol. per Test: 20 µl
Clone: GB11
Immunogen: Human Granzyme B
Isotype: Mouse IgG1, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The GB11 antibody specifically reacts with human granzyme B, a serine protease of approximately 32 kDa. Granzyme B is stored in the granules of cytotoxic T lymphocytes and NK cells along with the pore-forming protein perforin. In the classic model of target cell lysis, perforins create holes in the target cell membrane allowing entrance of granzymes. Granzyme B has been shown to act on specific substrates including caspase-3, -7, -9, and -10 which in turn give rise to enzymes that mediate apoptosis. Granzyme B may also be involved in the hydrolysis of extracellular matrix components. Detectable levels of granzyme B have been detected in sera from healthy volunteers. The immunogen used to generate the GB11 hybridoma was human granzyme B isolated from an NK cell line.

Expression of granzyme B by CD8 positive and CD8 negative peripheral blood mononuclear cells. Whole human blood was lysed with PharmLyse™ Lysing buffer (Cat. No. 555899) prior to staining with GB11. The lysed human blood was subsequently fixed, permeabilized and stained with APC-conjugated mouse anti-human CD8 (APC- RPA-T8, Cat. No. 555369) and either mouse anti-human granzyme B antibody (FITC- GB11, Cat. No. 558132), (filled histograms) or immunoglobulin isotype control (FITC- MOPC-21, Cat. No. 555909), (empty histograms) by using Pharmingen's staining protocol. To demonstrate specificity of staining, the binding of FITC-GB11 was blocked by preincubation of the fixed/permeabilized cells with an excess of unlabelled GB11 antibody (5 µg, data not shown) prior to staining. The histograms in the figure were derived from CD8-positive (Left panel) or CD8 -negative (Right panel) gated events.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Intracellular staining (flow cytometry) Routinely Tested

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Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<tr>
<td>555909</td>
<td>FITC Mouse IgG1, κ Isotype Control</td>
<td>100 tests</td>
<td>MOPC-21</td>
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<tr>
<td>555369</td>
<td>APC Mouse Anti-Human CD8</td>
<td>100 tests</td>
<td>RPA-T8</td>
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<tr>
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<tr>
<td>554714</td>
<td>BD Cytofix/Cytoperm™ Fixation/Permeablization Kit</td>
<td>250 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 $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
2. Please refer to wwwbdbiosciences.com/pharmingen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at wwwbdbiosciences.com/colors.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References
ten Berge IJ, Wever PC, Rentenaar RJ. Selective expansion of a peripheral blood CD8+ memory T cell subset expressing both granzyme B and L-selectin during primary viral infection in renal allograft recipients. Transplant Proc. 1998; 30(8):3975-3977. (Biology)