Technical Data Sheet

Biotin Rat Anti-Mouse CD278

Product Information
Material Number: 552145
Alternate Name: ICOS
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: 7E.17G9
Immunogen: Mouse Icos cDNA and ICOS hexahistidine fusion protein
Isotype: Rat IgG2b, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description
The 7E.17G9 antibody reacts with CD278, the Inducible Costimulatory molecule (ICOS), a 47-57 kDa homodimeric glycoprotein of the CD28 family of costimulatory molecules. ICOS is expressed on subpopulations of CD4-CD8- and CD4+CD8- (but not CD4-CD8+ or CD4+CD8+) thymocytes, on some T-cell lines, and on small numbers of peripheral leukocytes. It is upregulated on T lymphocytes following activation via the T-cell receptor. The T-cell activation marker H4 is the same molecule as ICOS. ICOS is a costimulatory receptor, and its ligand on antigen-presenting cells has been called B7RP-1, GL50, B7h, B7-H2, or LICOS. There is considerable evidence that the interaction of ICOS with its ligand is involved in the regulation of many, but not all, T-cell-mediated immune responses.

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

The expression of ICOS on activated T lymphocytes. BALB/c splenocytes were either unstimulated (top panels) or activated by culture for 48 hours in the presence of soluble 145-2C11 mAb (anti-mouse CD3ε, Cat. No. 553057, bottom panels). Both sets of cells were stained with either biotinylated rat IgG2b κ isotype control mAb A95-1 (Cat. No. 553987, left panels) or biotinylated mAb 7E.17G9 (right panels), followed by Streptavidin-PE (Cat. No. 554061) then FITC-conjugated mAb 53-6.7 (anti-mouse CD8a, Cat. No. 554061) then FITC-conjugated mAb 53-6.7 (anti-mouse CD8a, Cat. No. 553630/553631). Viable leukocytes were selected by exclusion of propidium iodide. Flow cytometry was performed on a FACSCalibur™ (BD Biosciences, San Jose, CA).
Application Notes

Application

<table>
<thead>
<tr>
<th>Flow cytometry</th>
<th>Routinely Tested</th>
</tr>
</thead>
</table>

Recommended Assay Procedure:
Since this antigen is expressed at only moderate density on activated T lymphocytes, it may be desirable to amplify the staining by using a "bright" second-step reagent, such as Streptavidin-PE (Cat. No. 554061).

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>554061</td>
<td>PE Streptavidin</td>
<td>0.5 mg</td>
<td>(none)</td>
</tr>
<tr>
<td>553987</td>
<td>Biotin Rat IgG2b, κ Isotype Control</td>
<td>0.25 mg</td>
<td>A95-1</td>
</tr>
<tr>
<td>553030</td>
<td>FITC Rat Anti-Mouse CD8a</td>
<td>0.1 mg</td>
<td>53-6.7</td>
</tr>
</tbody>
</table>

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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.

References

Schwartz RH. Immunology. It takes more than two to tango. Nature. 2001; 409(6816):31-32. (Biology)