Technical Data Sheet

PE Rat Anti-Mouse CD40

Product Information

Material Number: 561846
Size: 25 µg
Concentration: 0.2 mg/ml
Clone: 3/23
Immunogen: Mouse CD40 Recombinant Protein
Isotype: Rat (LOU) IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 3/23 clone reacts with CD40, a 40-50 kDa glycoprotein expressed on B lymphocytes and other antigen-presenting cells. CD40 has been reported to be transiently expressed on activated CD4+ and CD8+ T cells and in some mouse strains, the 3/23 mAb has been reported to react with 5-10% of T lymphocytes in adult mouse, but not neonatal, spleen. CD40 plays a key role in B-cell growth and differentiation where interactions of CD40 with its ligand, CD154, are involved in the initiation, effector, and memory stages of cell-mediated immune responses. In addition, CD40 has been reported to be involved with the triggering of NK cells and NK-T cells. Ligation of CD40 with the 3/23 antibody has been reported to induce splenic B cells to express the costimulatory molecule CD86 (B7-2). In addition, although the 3/23 antibody by itself is a weak B-cell mitogen, it has been reported to synergize markedly with mitogenic anti-IgM, anti-IgD mAb or IL-4 to promote B-cell proliferation.

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.

Application Notes

Application

Flow cytometry Routinely Tested

Recommended Assay Procedure:

This product has been reported to be compatible with intracellular staining protocols using the BD Cytofix/Cytoperm™ Kit (Cat. No. 554714).
Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>553046</td>
<td>FITC Rat Anti-Mouse CD4</td>
<td>0.1 mg</td>
<td>RM4-5</td>
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<tr>
<td>553030</td>
<td>FITC Rat Anti-Mouse CD8a</td>
<td>0.1 mg</td>
<td>53-6.7</td>
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<tr>
<td>554714</td>
<td>BD Cytofix/Cytoperm™ Fixation/Permeablization Kit</td>
<td>250 tests</td>
<td>(none)</td>
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<tr>
<td>553930</td>
<td>PE Rat IgG2a, κ Isotype Control</td>
<td>0.1 mg</td>
<td>R35-95</td>
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<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 ml</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.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. An isotype control should be used at the same concentration as the antibody of interest.

References

Bourgeois C, Rocha B, Tanchot C. A role for CD40 expression on CD8+ T cells in the generation of CD8+ T cell memory. Science. 2002; 297(5589):2060-2063. (Biology)
Parry SL, Hasbold J, Holman M, Klaus GG. Hypercross-linking surface IgM or IgD receptors on mature B cells induces apoptosis that is reversed by costimulation with IL-4 and anti-CD40. J Immunol. 1994; 152(6):2821-2829. (Biology)