Technical Data Sheet

Purified Rat Anti-Mouse F4/80-Like Receptor

Product Information

Material Number: 552958
Alternate Name: FIRE
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: 6F12
Immunogen: CHO cells expressing recombinant FIRE fusion protein
Isotype: Rat IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 6F12 antibody reacts with a 7-transmembrane-domain protein, which is similar to the F4/80 macrophage antigen of the EGF-TM7 protein family and is encoded by the Emr4 gene. The FIRE protein is expressed on myeloid cells with a dendritic cell (DC) developmental potential, including subsets of DC and macrophages in the spleen and lymph nodes, most resident peritoneal macrophages, many peripheral blood monocytes, and a subpopulation of bone-marrow myeloid-cell progenitors. The protein is not detected on peripheral T and B lymphocytes, and it is down-regulated on thioglycollate-elicited peritoneal macrophages and on dendritic cells activated by GM-CSF, IFN-γ, anti-CD40, and LPS. Using soluble biotinylated fusion protein, a FIRE ligand was detected on a mouse IgG+ B lymphoma cell line (A20), but not on myeloid, fibroblast, or T-cell lines, suggesting that the FIRE protein may be involved in immunoregulatory interactions between antigen-presenting cells and B lymphocytes.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

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Recommended Assay Procedure:
For flow cytometry of leukocyte suspensions, we recommend that Mouse BD Fc Block™ purified anti-mouse CD16/CD32 mAb 2.4G2 (Cat. No. 553141/553142) be used. Since this antigen is expressed at low density on myeloid cells, it may be desirable to amplify staining by using a biotinylated second-step antibody followed by a "bright" third-step reagent, such as Streptavidin-APC (Cat. No. 554067). If Mouse BD Fc Block™ antibody is used, it is important that the second-step anti-rat IgG does not react with 2.4G2 mAb (rat IgG2b, κ); we recommend biotinylated anti-rat IgG2a mAb RG7/1.30 (Cat. No. 553894).

Suggested Companion Products

<table>
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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>553927</td>
<td>Purified Rat IgG2a, x Isotype Control</td>
<td>0.5 mg</td>
<td>R35-95</td>
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<tr>
<td>553141</td>
<td>Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)</td>
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<td>2.4G2</td>
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<tr>
<td>553894</td>
<td>Biotin Mouse Anti-Rat IgG2a</td>
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<td>RG7/1.30</td>
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<td>554067</td>
<td>APC Streptavidin</td>
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<td>557396</td>
<td>FITC Rat Anti-Mouse CD11b</td>
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<tr>
<td>557401</td>
<td>PE Hamster Anti-Mouse CD11c</td>
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Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
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.

References