Technical Data Sheet

Biotin Rat Anti-Mouse CD35

Product Information

Material Number: 553816
Alternate Name: CR1, CD21b
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: 8C12
Immunogen: Purified mouse CR1
Isotype: Rat (SD) IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 8C12 antibody recognizes an epitope present on the 190-kDa complement receptor protein, originally designated CR1 (CD35), but not the 145-150-kDa CR2 (CD21) molecule. Unlike the human system, in which these proteins are products of independent genes, both of these mouse receptors are membrane proteins resulting from the alternative splicing of mRNA transcribed from the Cr2 gene. Therefore, an alternative nomenclature has been proposed, designating the proteins Cr2-190 (CD21b) and Cr2-145 (CD21a), respectively. The epitope recognized by 8C12 mAb is only present on CD35/CD21b. Moreover, it has also been proposed that Crry is the true mouse genetic homologue of human CR1 (CD35). In the mouse, CD35 is expressed on the majority of peripheral B cells, on the majority of resident peritoneal macrophages, on peripheral blood granulocytes after treatment with N-formyl-Met-Leu-Phe, and on follicular dendritic cells, but not on thymocytes, T cells, erythrocytes, or platelets. In addition, it has not been detected, at the protein or mRNA level, in the macrophage cell line J774, bone marrow-derived macrophages, or thioglycollate-elicited peritoneal macrophages. The 8C12 mAb has been reported to inhibit rosette formation by C3b-bearing sheep erythrocytes, to block the complement-dependent trapping of immune complexes by follicular dendritic cells, and to down-regulate mouse CD35 expression upon in vivo application, inhibiting only some primary antibody responses to immunization. B lymphocytes of Cr2[null] mice display impaired humoral immune responses in vivo. The 8C12 mAb recognizes an epitope on mouse CD35 distinct from the epitope recognized by anti-mouse CD21/CD35 mAb 7G6 (Cat. no. 553817), and it does not block binding by 7G6 mAb to CD35.

*Please note that the isotype of 8C12 mAb was originally reported to be Rat IgG2c. Further investigations have demonstrated that the isotype of 8C12 mAb is Rat IgG2a.

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.

Application Notes

Application

Flow cytometry Routinely Tested
Immunohistochemistry-frozen Reported

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>553817</td>
<td>Purified Rat Anti-Mouse CD21/CD35</td>
<td>0.5 mg</td>
<td>7G6</td>
</tr>
<tr>
<td>553928</td>
<td>Biotin Rat IgG2a κ Isotype Control</td>
<td>0.25 mg</td>
<td>R35-95</td>
</tr>
<tr>
<td>554060</td>
<td>FITC Streptavidin</td>
<td>0.5 mg</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Product Notices

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

BD Biosciences

www.bdbiosciences.com

United States  Canada  Europe  Japan  Asia Pacific  Latin America/Caribbean
877.232.8995  888.259.0187  32.53.720.550  0120.855.50  65.5861.0633  55.11.5185.9995

For country-specific contact information, visit www.bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or conveys any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2007 BD
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


