PE Mouse Anti-Human CD234 (DARC)

Product Information

Material Number: 566424
Alternate Name: DUFFY; Dfy; FY; Fy glycoprotein; Glycoprotein D; GPD; CCBP1
Size: 100 Tests
Vol. per Test: 5 µl
Clone: NaM185-2C3 (also known as 2C3)
Immunogen: Human CD234 Transfected Cell Line
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: VII 70537
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The NaM185-2C3 monoclonal antibody specifically recognizes CD234 which is also known as the Duffy antigen/receptor for chemokines (DARC), Fy glycoprotein (FY), or Glycoprotein D (GPD). CD234 is a seven-transmembrane domain acidic glycoprotein that is encoded by ACKR1 [atypical chemokine receptor 1 (Duffy blood group)] and belongs to the chemokine receptor superfamily. CD234 is responsible for the Duffy blood group system and is expressed on erythrocytes, endothelial cells, and some epithelial cells and Purkinje cells. CD234 binds to multiple chemokines including CXCL1 (also known as, MGSA or GROα), CXCL8 (IL-8), CCL2 (MCP-1), and CCL5 (RANTES). Because CD234 is not a signaling receptor, it may act as a decoy receptor or scavenger and serve to control chemokine levels. CD234 may also serve to regulate the availability of chemokines such as when it is expressed by endothelial cells at inflammatory sites or by postcapillary endothelial cells. CD234 can mediate chemokine transcytosis from the basolateral to the luminal side of the endothelium, where the bound chemokines are “presented” to regulate leukocyte trafficking. CD234 functions as a receptor for malarial parasites including Plasmodium vivax and Plasmodium knowlesi. Some individuals with mutations that prevent CD234 expression in erythrocytes are resistant to infection by these pathogens. The NaM185-2C3 antibody reportedly detects a protease-sensitive determinant and inhibits IL-8 binding to the Duffy antigen.

Flow cytometric analysis of CD234 expression on human peripheral blood erythrocytes. Human peripheral blood erythrocytes were stained with either PE Mouse IgG1, κ Isotype Control (Cat. No. 559320; dashed line histogram) or PE Mouse Anti-Human CD234 antibody (Cat. No. 566424; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side-light scattering characteristics of erythrocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ X-20 Flow Cytometer System. Data shown on this Technical Data Sheet are not lot specific.

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. The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

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Suggested Companion Products

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<th>Name</th>
<th>Size</th>
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<tbody>
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<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
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<td>559320</td>
<td>PE Mouse IgG1, κ Isotype Control</td>
<td>100 Tests</td>
<td>MOPC-21</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. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

**References**


