PE Mouse Anti-Human Langerin (CD207)

Product Information

Material Number: 564727
Alternate Name: CLC4K; CLEC4K; C-type lectin domain family 4 member K
Size: 50 tests
Vol. per Test: 5 µl/test
Clone: 2G3 (also known as AB5 8.2G3.6)
Immunogen: Human Langerin Recombinant Protein
Isotype: Mouse IgG1, \(\lambda\)
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA and \(\leq 0.09\%\) sodium azide.

Description

The 2G3 monoclonal antibody specifically binds to Langerin which is also known as CD207 or C-type lectin domain family 4 member K (CLEC4K). CD207 is a 48 kDa type II transmembrane glycoprotein that belongs to the C-type lectin family. CD207 is selectively expressed by Langerhans cells, an immature dendritic cell type that is found in the epidermis and mucosal epithelia, and by some other dendritic cell subsets. CD207 is expressed on the cell surface membrane and by intracellular Birbeck granules whose formation depends on CD207. CD207 binds to certain surface carbohydrates that are expressed by microbes. It appears to play a role in the uptake of these microbes for subsequent processing and microbial antigen presentation to T cells.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

<table>
<thead>
<tr>
<th>Intracellular staining (flow cytometry)</th>
<th>Routinely Tested</th>
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</thead>
<tbody>
<tr>
<td>Flow cytometry</td>
<td>Tested During Development</td>
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</tbody>
</table>

Multicolor flow cytometric analysis of human Langerin (CD207) expression by monocyte-derived Langerhans cells.

Peripheral blood monocytes were cultured with Recombinant Human GM-CSF (Cat. No. 550068; 100 ng/ml), IL-4 (Cat. No. 554605; 20 ng/ml), and TGF-\(\beta\) (Corning; Cat. No. 354039; 40 ng/ml) proteins for 3 days followed by an additional 3-day culture with GM-CSF and TGF-\(\beta\). The cells were washed and stained with APC Mouse Anti-Human CD1a antibody (Cat. No. 559775/561755) and BD Horizon™ Fixable Viability Stain 450 (Cat. No. 562247). After washing, the cells were fixed and permeabiltized with BD Cytofix/Cytoperm™ Fixation and Permeabilization Solution (Cat. No. 554722). The cells were subsequently washed and stained in BD Perm/Wash™ Buffer (Cat. No. 554723) with either PE Mouse IgG1, \(\kappa\) Isotype Control (Cat. No. 554680; Left Panel) or PE Mouse Anti-Human Langerin (CD207) antibody (Cat. No. 564727; Right Panel). Flow cytometric contour plots showing the correlated expression of Langerin (CD207) [or Ig Isotype control staining] versus CD1a were derived from gated events with the forward and side light-scatter, and viability stain characteristics of intact cells. Flow cytometric analysis was performed using a BD LSRII® Fortessa™ X-20 Cell Analyzer System.

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**Suggested Companion Products**

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<td>Stain Buffer (FBS)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
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<td>554680</td>
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<td>MOPC-21</td>
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<td>Recombinant Human IL-4</td>
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<td>APC Mouse Anti-Human CD1a</td>
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<td>562247</td>
<td>Fixable Viability Stain 450</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).
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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. An isotype control should be used at the same concentration as the antibody of interest.

**References**