Technical Data Sheet

PE Mouse Anti-Human CD124

**Product Information**

- **Material Number:** 552178
- **Alternate Name:** IL-4 Receptor α Chain, CD124
- **Size:** 100 Tests
- **Vol. per Test:** 20 µl
- **Clone:** hiIL4R-M57
- **Immunogen:** Soluble Human IL-4 Receptor
- **Isotype:** Mouse IgG1, κ
- **Reactivity:** QC Testing: Human
- **Workshop:** V C004, BP169; VI BP205, C81
- **Storage Buffer:** Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The hiIL4R-M57 antibody specifically binds to the α subunit (IL-4Rα) of the human Interleukin-4 Receptor complex which is also known as CD124. The human IL-4Rα, also known as B cell stimulatory factor 1 receptor (BSF-1 receptor), is a 140 kDa transmembrane glycoprotein that is expressed by B and T lymphocytes and a variety of other hematopoietic and non-hematopoietic cells and cell lines. The cell surface IL-4Rα chain binds IL-4 with high affinity and associates with either the common γ chain (IL-4Rα/γc; aka, type I IL-4R complex) or the IL-13 receptor alpha-1 subunit (IL-4Rα/IL-13Rα1; aka, type II IL-4R complex) to form two distinct types of signal-transducing IL-4R complexes.

The type I IL-4 receptor complex specifically binds IL-4 whereas the type II IL-4R complex binds and transduces signals from either IL-4 or IL-13. A truncated form of the IL-4Rα exists in soluble form in biological fluids. In contrast to mice, in humans no distinct mRNA coding for sIL-4Rα has been described, suggested that human sIL4-Rα is exclusively produced by proteolytic cleavage of the cell surface receptor. The serum levels of soluble IL-4Rα appear to elevate in pathological situations such as allergy and parasitic infections. Depending on the ratios of IL-4 and sIL-4Rα present in the local milieu, the sIL-4Rα may augment or antagonize the activities of IL-4. The immunogen used to generate the hiIL4R-M57 hybridoma was soluble human IL-4R.

**Flow cytometric analysis of CD124 expression on human PBMC.** Human PBMC isolated by density gradient centrifugation (Ficoll-Paque™) were blocked with either normal polyclonal human IgG and stained with PE Mouse Anti-Human CD124 (Cat. No. 552178; filled histogram) or PE Mouse IgG1, κ Isotype Control (Cat. No. 555749; open histogram) at at 20 µl/10⁶ cells. Fluorescence histograms depicting CD124 (or Ig isotype) expression were derived from gated events with the forward and side light-scatter characteristics of viable CD19+ lymphocytes.

**Note:** Certain human cell lines or cell types (e.g., neutrophils and monocytes) can first be treated with reagents that block receptors for the Fc regions of immunoglobulin to avoid nonspecific immunofluorescent staining mediated by Fc receptors.

**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 |

**Recommended Assay Procedure:**

**Immunofluorescent Staining and Flow Cytometric Analysis:** The PE Mouse Anti-Human CD124 (Cat. No. 554178) antibody can be used for the immunofluorescent staining (20 µl/10⁶ cells) and flow cytometric analysis of human nucleated cells to measure their expressed levels of surface hiIL-4Rα. An appropriate purified immunoglobulin isotype control is PE Mouse IgG1, κ Isotype Control (Cat. No. 555749).
Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<tbody>
<tr>
<td>555749</td>
<td>PE Mouse IgG1, κ Isotype Control</td>
<td>100 Tests</td>
<td>MOPC-21</td>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
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<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</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 × 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.
6. Ficoll-Paque is a trademark of Amersham Biosciences Limited.

References


