Technical Data Sheet

Purified Mouse Anti-Human CD124

Product Information

Material Number: 551894
Alternate Name: IL-4 Receptor α Chain, CD124
Size: 0.1 mg
Concentration: 0.5 mg/ml
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 ≤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 sIL-4Rα 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.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry Routinely Tested

Recommended Assay Procedure:

Immunofluorescent Staining and Flow Cytometric Analysis: Purified Mouse Anti-Human CD124 (Cat. No. 551894) antibody can be used for the immunofluorescent staining (≤ 1 µg antibody/10^6 cells) and flow cytometric analysis of human nucleated cells to measure their expressed levels of CD124. An appropriate purified immunoglobulin isotype control is Purified Mouse IgG1, κ Isotype Control (Cat. No. 555746). A three-layer staining protocol is recommended for maximizing the detection of CD124 expressed by cells as detailed in the image legend.
Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tbody>
<tr>
<td>555746</td>
<td>Purified Mouse IgG1, κ Isotype Control</td>
<td>0.1 mg</td>
<td>MOPC-21</td>
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<tr>
<td>553999</td>
<td>Biotin Goat Anti-Mouse Ig (Multiple Adsorption)</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
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<td>554061</td>
<td>PE Streptavidin</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. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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. Ficoll-Paque is a trademark of Amersham Biosciences Limited.
5. 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.

References
Zola H. Detection of receptors for cytokines and growth factors. The Immunologist. 1994:47. (Biology)