Human IL-18 Rα/IL-1 R5 Antibody
Monoclonal Mouse IgG1, Clone # 70625
Catalog Number: MAB840

DESCRIPTION

Species Reactivity: Human

Specificity: Detects Recombinant Human IL-18 Rα/IL-1 R5 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-1 RI, rhIL-1 RII, rhIL-1 R3, rhIL-1 R4, rhIL-1 R6, rhIL-1 RT, rhIL-1 R8, rhIL-1 R9, rhSIGIRR or recombinant mouse IL-18 Rα is observed.

Source: Monoclonal Mouse IgG1, Clone # 70625

Purification: Protein A or G purified from hybridoma culture supernatant

Immunogen: Mouse myeloma cell line NSO-derived recombinant human IL-18 Rα/IL-1 R5

Glu20-Avg329
Accession # Q13478

Endotoxin Level: <0.10 EU per 1 µg of the antibody by the LAL method.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>APPLICATIONS</th>
<th>Recommended Concentration</th>
<th>Sample</th>
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</thead>
<tbody>
<tr>
<td>Flow Cytometry</td>
<td>2.5 µg/10⁶ cells</td>
<td>Human peripheral blood mononuclear cells treated with PHA and Recombinant Human IL-2 (Catalog # 202-IL)</td>
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<tr>
<td>Immunocytochemistry</td>
<td>8-25 µg/mL</td>
<td>See Below</td>
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<tr>
<td>Immunohistochemistry</td>
<td>8-25 µg/mL</td>
<td>Immersion fixed paraffin-embedded sections of human skin</td>
</tr>
<tr>
<td>CyTOF-ready</td>
<td>Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
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<tr>
<td>Neutralization</td>
<td>Measured by its ability to neutralize IL-18/IL-1F4-induced IFN-γ secretion in KG-1 human myeloid leukemia cells. The Neutralization Dose (ND₅₀) is typically 0.03-0.1 µg/mL in the presence of 40 ng/mL Recombinant Human IL-18/IL-1F4 and 20 ng/mL Recombinant Human TNF-α.</td>
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</tbody>
</table>

DATA

**Immunocytochemistry**

IL-18 Rα/IL-1 R5 in Human PBMCs. IL-18 Rα/IL-1 R5 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using 10 µg/mL Mouse Anti-Human IL-18 Rα/IL-1 R5 Monoclonal Antibody (Catalog # MAB840) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL077) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

**Neutralization**

IFN-γ Secretion Induced by IL-18/IL-1F4 and Neutralization by IL-18 Rα/IL-1 R5 Antibody.

In the presence of Recombinant Human TNF-α (20 ng/mL, Catalog # 205-TA). Recombinant Human IL-18/IL-1F4 (Catalog # B003) stimulates IFN-γ secretion in KG-1 human myeloid leukemia cells in a dose-dependent manner (orange line), as measured by the Human IFN-γ Quantikine ELISA Kit (Catalog # D500). Under these conditions, IFN-γ secretion elicited by Recombinant Human IL-18/IL-1F4 (40 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human IL-18/IL-1F4 Rα/IL-1 R5 Monoclonal Antibody (Catalog # MAB840). The ND₅₀ is typically 0.03-0.1 µg/mL.

PREPARATION AND STORAGE

Reconstitution: Reconstitute at 0.5 mg/mL in sterile PBS.

Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

Stability & Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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Interleukin 18 (IL-18) is a member of the IL-1 family of cytokines and shares numerous immunoregulatory functions with IL-12. The functional IL-18 receptor complex is composed of two subunits designated IL-18 Rα (also termed IL-1 R5 and IL-1 Rrp) and IL-18 Rβ (also termed IL-1 R7 and AcPL). Both IL-18 Rα and IL-18 Rβ belong to the IL-1 receptor superfamily. Although IL-18 R by itself binds IL-18 with low affinity and IL-18 Rβ does not bind IL-18 in vitro, co-expression of IL-18 Rα and IL-18 Rβ is required for high affinity binding and IL-18 responsiveness. Human IL-18 R cDNA encodes a 541 amino acid (aa) precursor type I membrane protein with a hydrophobic signal, an extracellular domain comprised of three immunoglobulin-like domains, a transmembrane domain and a cytoplasmic region of approximately 200 aa. Human and mouse IL-18 R share 65% amino acid sequence homology. IL-18 R is widely expressed in numerous tissues including spleen, thymus, leukocyte, liver, lung, heart, small and large intestine, prostate and placenta.

References: