

DESCRIPTION

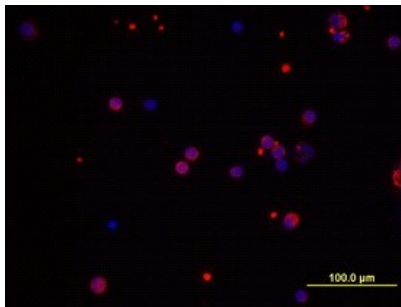
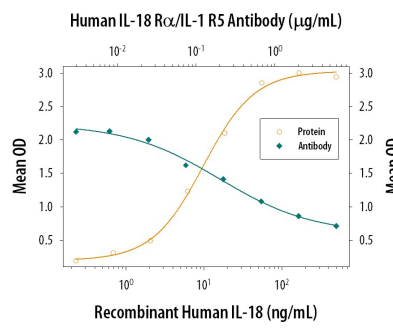
Species Reactivity	Human
Specificity	Detects Recombinant Human IL-18 R α /IL-1 R5 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-1 R1, rhIL-1 RII, rhIL-1 R3, rhIL-1 R4, rhIL-1 R6, rhIL-1 R7, rhIL-1 R8, rhIL-1 R9, rhSIGIRR or recombinant mouse IL-18 R α is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 70625
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-18 R α /IL-1 R5 Glu20-Arg329 Accession # Q13478
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

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.

	Recommended Concentration	Sample
Flow Cytometry	2.5 μ g/10 ⁶ cells	Human peripheral blood mononuclear cells treated with PHA and Recombinant Human IL-2 (Catalog # 202-IL)
Immunocytochemistry	8-25 μ g/mL	See Below
Immunohistochemistry	8-25 μ g/mL	Immersion fixed paraffin-embedded sections of human skin
Neutralization		Measured by its ability to neutralize IL-18/IL-1F4-induced IFN- γ secretion in KG-1 human myeloid leukemia cells. The Neutralization Dose (ND ₅₀) is typically 0.03-0.1 μ g/mL in the presence of 40 ng/mL Recombinant Human IL-18/IL-1F4 and 20 ng/mL Recombinant Human TNF- α .

DATA

<p>Immunocytochemistry</p>  <p>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 # NL007) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p>	<p>Neutralization</p>  <p>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 # 210-TA), Recombinant Human IL-18/IL-1F4 (Catalog # B003-5) 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 # DIF50). 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 Rα/IL-1 R5 Monoclonal Antibody (Catalog # MAB840). The ND₅₀ is typically 0.03-0.1 μg/mL.</p>
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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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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.

BACKGROUND

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 R α (also termed IL-1 R5 and IL-1 Rrp) and IL-18 R β (also termed IL-1 R7 and AcPL). Both IL-18 R α and IL-18 R β belong to the IL-1 receptor superfamily. Although IL-18 R by itself binds IL-18 with low affinity and IL-18 R β does not bind IL-18 *in vitro*, co-expression of IL-18 R α and IL-18 R β 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:

1. Parnet, P. *et al.* (1996) *J. Biol. Chem.* **271**:3967.
2. Torigoe, K. *et al.* (1997) *J. Biol. Chem.* **272**:25737.
3. Born, T.L. *et al.* (1998) *J. Biol. Chem.* **273**:29445.