

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-12 Rβ1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse IL-12 Rβ1 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 69310
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IL-12 Rβ1 Cys24-Glu540 Accession # P42701
<b>Formulation</b>	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	2.5 μg/10 <sup>6</sup> cells	Human peripheral blood mononuclear cells treated with PHA

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Interleukin12 (IL-12) is a key mediator of cellular-immunity and induces the differentiation of Th1 cells from precursor T helper cells. The biological activities of IL-12 are mediated through the high-affinity receptor complex composed of two subunits designated IL-12 Rβ1 and IL-12 Rβ2. Individually, IL-12 Rβ1 and IL-12 Rβ2 bind IL-12 with low affinity. Co-expression of both subunits confers high-affinity binding and is required for IL-12 activity. Both IL-12 receptor subunits are type I transmembrane proteins that share similarities with the gp130/G-CSF R subgroup in the cytokine receptor superfamily. IL-12 Rβ1 cDNA encodes a 662 amino acid (aa) protein with a putative 23 aa signal peptide that is cleaved to generate the mature protein with a 522 aa extracellular domain, a 25 aa transmembrane domain and a 92 aa cytoplasmic region. Expression of IL-12 Rβ1 is detected in activated T cells, NK cells and B cells. The expression of IL-12 Rβ2 is more restricted and appears to be limited to Th2 cells.

## References:

1. Gately, M.K. *et al.* (1998) *Annu. Rev. Immunol.* **16**:495.