

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-12 R $\beta$ 1 in direct ELISAs and Western blots. In these formats, less than 2% cross-reactivity with recombinant mouse IL-12 R $\beta$ 1 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IL-12 R $\beta$ 1 Cys24-Glu540 Accession # P42701
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose.

#### 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>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Human IL-12 R $\beta$ 1 Fc Chimera (Catalog # 839-B1)

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 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.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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

Interleukin 12 (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 R $\beta$ 1 and IL-12 R $\beta$ 2. Individually, IL-12 R $\beta$ 1 and IL-12 R $\beta$ 2 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 membrane proteins that share similarities with the gp130/G-CSF R subgroup in the cytokine receptor superfamily. IL-12 R $\beta$ 1 cDNA encodes a 662 amino acid (aa) residue protein with a putative 23 aa residue signal peptide that is cleaved to generate the mature protein with a 522 aa residue extracellular domain, a 25 aa residue transmembrane domain and a 92 aa residue cytoplasmic region. Expression of IL-12 R $\beta$ 1 has been detected in activated T cells, NK cells and B cells. The expression of IL-12 R $\beta$ 2 is more restricted and appears to be limited to Th2 cells.

#### References:

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