

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-11 R $\alpha$ in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with rIL-11 R $\alpha$ or recombinant human IL-6 R $\alpha$ is observed. In Western blots, 25% cross-reactivity with recombinant mouse (rm) IL-11 R $\alpha$ is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 473143
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IL-11 R $\alpha$ Cys26-Val363 Accession # Q14626
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 $\mu$ 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 $\mu$ g/mL	Recombinant Human IL-11 R $\alpha$ Fc Chimera (Catalog # 1977-MR)

## 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

Human interleukin 11 receptor alpha (IL-11 R $\alpha$ ) is 150 kDa type I transmembrane protein in the hematopoietin cytokine receptor family that was cloned on the basis of its conserved WSXWS motif. IL-11 R $\alpha$  cDNA encodes a 422 amino acid (aa) residue precursor type I membrane protein, containing a signal peptide followed by extracellular (ECD), transmembrane and cytoplasmic domains. The extracellular region which is closely related to that of IL-6 R $\alpha$  and CNTF R $\alpha$  contains an immunoglobulin-like domain and two fibronectin-type III-like domains. Within the ECD, human IL-11 R $\alpha$  shares 85% and 83% aa sequence identity with mouse and rat IL-11 R $\alpha$ , respectively (1-3). Alternate splicing generates an isoform of human IL-11 R $\alpha$  which lacks the cytoplasmic domain. By itself, IL-11 R $\alpha$  binds IL-11 with low affinity. IL-11 R $\alpha$ , together with gp130, forms a functional high-affinity receptor complex for IL-11. The expression of IL-11 R $\alpha$  has been detected in all adult tissues examined (lung, stomach, intestine), during embryonic development and in totipotent and differentiating embryonic stem cells. Recombinant soluble IL-11 R $\alpha$  has been shown to mediate IL-11 responsiveness in cells expressing the gp130 molecule. In cells expressing transmembrane IL-11 R $\alpha$  and gp130, soluble IL-11 R $\alpha$  has been shown to act as an IL-11 antagonist (3-6).

### References:

1. Cherel, M. *et al.* (1995) *Blood* **86**:2534.
2. Schleinkofer, K. *et al.* (2001) *J. Mol. Biol.* **306**:263.
3. Nandurkar, H.H. *et al.* (1996) *Oncogene* **12**:585.
4. Taga, T. *et al.* (1997) *Annu. Rev. Immuno.* **15**:797.
5. Davidson, A.J. *et al.* (1997) *Stem Cells* **15**:119.
6. Curtis, D.J. *et al.* (1997) *Blood* **90**:4403.