

## Recombinant Rat IL-4 Protein

### Product Information

Product Name	Cat#	Size
	90169ES08	5 µg
Recombinant Rat IL-4 Protein	90169ES60	100 µg
	90169ES76	500 µg

### Product Description

Interleukin-4 (IL-4), also known as B cell-stimulatory factor-1, is a pleiotropic cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells and produced by by mast cells, activated T cells and bone marrow stromal cells. Mature human IL-4 shares 55%, 39% and 43% aa sequence identity with bovine, mouse, and rat IL-4, respectively. It is a potent cytokine produced by T cells and to a lesser extent by tumor-associated natural killer cells, basophils, and mast cells. IL-4 is a differentiation factor for transforming growth factor-beta secreting Th3. And IL-4 activates two distinct signalling pathways through tyrosine phosphorylation of Stat6, a signal transducer and activator of transcription, and of a 170K protein called 4PS.

### Product Properties

<b>Synonyms</b>	Interleukin-4, IL-4, BSF-1, BCDF, IL4E12, PitraKinra
<b>Accession</b>	P20096
<b>GeneID</b>	287287
<b>Source</b>	E.coli-derived rat IL-4 protein, His23-Ser147.
<b>Molecular Weight</b>	Approximately 14.0 kDa.
<b>AA Sequence</b>	HGCNDSPLRE IINTLNQVTE KGTPCTEMFV PDVLTATRNT TENELICRAS RVLRFYFPR DVPPCLKNKS GVLGELRKLC RGVSGLNSLR SCTVNESTLT TLKDFLES�K SILRGKYLQS CTSMS
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using rat splenocytes is less than 1.0 ng/mL, corresponding to a specific activity of > 1.0 × 10 <sup>6</sup> IU/mg.
<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4, 5% trehalose. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

### Shipping and Storage

The products are shipped with ice pack and can be stored at -20 °C for 1 year.

1 month, 2 to 8 °C under sterile conditions after reconstitution.

3 months, -20 °C under sterile conditions after reconstitution.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!