

## Recombinant Rat Interleukin 15

Cat. No. II15-88R Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Rat Interleukin-15 produced in *E. Coli* is a single, non-glycosylated polypeptide chain containing 115 amino acids and having a molecular mass of 13533 Dalton. The IL-15 is purified by proprietary chromatographic techniques.

**Species** Rat

**Source** E.coli

**Description** The protein encoded by this gene is a cytokine that regulates T and natural killer cell activation and proliferation. This cytokine and interleukin 2 share many biological activities. They are found to bind common hematopoietin receptor subunits, and may compete for the same receptor, and thus negatively regulate each other's activity. The number of CD8+ memory cells is shown to be controlled by a balance between this cytokine and IL2. This cytokine induces the activation of JAK kinases, as well as the phosphorylation and activation of transcription activators STAT3, STAT5, and STAT6. Studies of the mouse counterpart suggested that this cytokine may increase the expression of apoptosis inhibitor BCL2L1/BCL-x(L), possibly through the transcription activation activity of STAT6, and thus prevent apoptosis. Two alternatively spliced transcript variants of this gene encoding the same protein have been reported.

**Amino Acid Sequence** The sequence of the first five N-terminal amino acids was determined and was found to be Met-Asn-Trp-Ile-Asp.

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<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
<b>Formulation</b>	The protein was lyophilized from 10mM Tris, pH- 8.5.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized Interleukin-15 in sterile 18 MΩ-cm H <sub>2</sub> O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
<b>Specific Activity</b>	The ED <sub>50</sub> as determined by the dose-dependant stimulation of the proliferation of CTLL-2 was found to be < 10 ng/ml, corresponding to a Specific Activity of 1 x 10 <sup>5</sup> IU/mg.
<b>Stability</b>	Lyophilized Interleukin-15 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL15 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

<b>Gene Name</b>	Il15 interleukin 15 [ <i>Rattus norvegicus</i> ]
<b>Synonyms</b>	Il15; interleukin 15
<b>Gene ID</b>	25670
<b>mRNA Refseq</b>	NM_013129

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<b>Protein Refseq</b>	NP_037261
<b>UniProt ID</b>	P97604
<b>Chromosome Location</b>	19q11
<b>Pathway</b>	Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway
<b>Function</b>	cytokine activity; molecular_function; protein binding

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