

Recombinant Rat Interleukin 15

Cat. No. IL15-88R Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Interleukin-15 produced in <i>E. Coli</i> 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 interleukine 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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Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The protein was lyophilized from 10mM Tris, pH- 8.5.
Solubility	It is recommended to reconstitute the lyophilized Interleukin-15 in sterile 18 MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	The ED ₅₀ 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 ⁵ IU/mg.
Stability	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

Gene Name	IL15 interleukin 15 [<i>Rattus norvegicus</i>]
Synonyms	IL15; interleukin 15
Gene ID	25670
mRNA Refseq	NM_013129

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

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