

Interleukin-15

Human, Recombinant (rHuIL15)

Expressed in *E. coli*

Cat. No. CRP0820

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Interleukin-15 (IL-15) is a cytokine that possesses a variety of biological functions, including stimulation and maintenance of cellular immune responses. IL-15 stimulates the proliferation of T-lymphocytes, which requires interaction of IL-15 with components of IL-2R, including IL-2R and probably IL-2R gamma, but not IL-2R.

Amino-Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Asn-Trp-Val-Asn-Val.

M. W. : 12,774 Da

Recombinant: Expressed in *E. coli*

Purity: >98% as determined by RP-HPLC, FPLC and SDS-PAGE .

Formulation: The protein was lyophilized from a concentrated (1mg/ml) solution with 5mM Tris pH 8.0.

Specific Activity: The ED50 as determined by the dose-dependant stimulation of the proliferation of CTLL-2 was found to be < 0.5 ng/ml, corresponding to a Specific Activity of 2.0×10^6 IU/mg.

Endotoxin: Less than 0.1 ng/μg (IEU/μg) of rHuIL-15.

Reconstitution: It is recommended to reconstitute the lyophilized rHuIL-15 in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Storage: Lyophilized rHuIL-15 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIL-15 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). Aliquot to avoid repeated freeze-thaw cycles.

FOR RESEARCH USE ONLY

GENE INFORMATION

Gene Name: [IL15](#)

Gene Alias: IL-15, MGC9721

Gene Type: protein coding

mRNA Refseq: [NM_000585](#)

Protein Refseq: [NP_000576](#)

MIM: [600554](#)

GeneID: [3600](#)

Chromosome Location: 4q31

Summary: 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.

Pathway: Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway

Function: hematopoietin/interferon-class; cytokine receptor binding; protein binding; signal transducer activity

REFERENCES

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2. Liew FY, McInnes IB. Role of interleukin 15 and interleukin 18 in inflammatory response. *Ann. Rheum. Dis.* 2002; 61 Suppl 2: ii100-102
3. Lodolce J P, Burkett P R, et al. Regulation of lymphoid homeostasis by interleukin-15. *Cytokine Growth Factor Rev.* 2003; 13 (6): 429-439

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