IMMUNOLOGICAL SCIENCES Product Data Sheet

GRF-10526 **Recombinant Human Interleukin-15 (IL-15)**

Quantity: 10 μg

Introduction: 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.

Description : Interleukin-15 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 114 amino acids and having a molecular mass of 12774 Dalton. The IL-15 is purified by proprietary chromatographic techniques.

Source: E.Coli

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation: The protein was lyophilized from PBS pH 7.4.

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

Stability: Lyophilized Human IL-15 although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution Human IL-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). **Please avoid freeze-thaw cycles.**

Purity: Greater than 98.0% as determined by
(a) Analysis by RP-HPLC.
(b) Analysis SDS-PAGE.

Amino acid sequence: MNWVNVISDL KKIEDLIQSM HIDATLYTES DVHPSCKVTA MKCFLLELQV ISLESGDASI HDTVENLIIL ANNSLSSNGN VTESGCKECE ELEEKNIKEF LQSFVHIVQM FINTS.

Biological activity: The ED50 as determined by the dose-dependant stimulation of the proliferation of mouse CTLL-2 was found to be < 0.5 ng/ml, corresponding to a Specific Activity of 2 x 106 IU/mg.

Protein content: Protein quantitation was carried out by two independent methods:
1. UV spectroscopy at 280 nm using the absorbency value of 0.55 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences.
2. Analysis by RP-HPLC, using a calibrated solution of IL-15 as a Reference Standard