



Interleukin-15, rat recombinant (rrIL-15)

Catalog No: 87366
Lot No: XXXXX
Source: *E. coli*
Synonyms: IL-15, MGC9721

Background

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 rat recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 115 amino acids and having a molecular mass of 13533 Dalton. IL-15 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from 10 mM Tris, pH 8.5.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-15 in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

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.

Purity

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

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.

Activity

The ED50 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 100,000 IU/mg.

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



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