



Interleukin-22, PEGylated, mouse recombinant (rmIL-22-PEG)

Catalog No: 97317
Lot No: XXXXX
Source: *E. coli*
Synonyms: IL-TIF, TIFa, IL-10-related T-cell-derived-inducible factor, IL-22, ILTIF, IL-D110, zcyto18, MGC79382, MGC79384, TIFIL-23

Background

Interleukin-22 (IL-22), also known as IL-10-related T cell-derived inducible factor (IL-TIF) was initially identified as a gene induced by IL-9 in mouse T cells and mast cells. Mouse IL-22 cDNA encodes a 179 amino acid residue protein with a putative 33 amino acids signal peptide that is cleaved to generate a 147 aa mature protein that shares approximately 79% and 22% aa sequence identity with human IL-22 and IL-10, respectively. IL-22 has been shown to activate STAT-1 and STAT-3 in several hepatoma cell lines and upregulate the production of acute phase proteins. IL-22 is produced by normal mouse T cells upon Con A activation. Mouse IL-22 expression is also induced in various organs upon lipopolysaccharide injection, suggesting that IL-22 may be involved in inflammatory responses. The functional IL-22 receptor complex consists of two receptor subunits, IL-22R (previously an orphan receptor named CRF2-9) and IL-10R β (previously known as CRF2-4), belonging to the class II cytokine recep

Description

Pegylated Interleukin-22 mouse recombinant produced in *E. coli* is a single, non-glycosylated homodimeric polypeptide chain containing 147 amino acids and an additional Ala amino acid at N-terminus having a molecular mass of 36 kDa as determined by mass spectrometry. However due to enlarged hydrodynamic volume it runs on the SDS-PAGE as a 50 kDa protein and in gel-filtration on Superdex 200 as over 200 kDa protein. Murine IL-22 is mono-pegylated (with 20 kDa PEG) and is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a concentrated solution at 0.65 mg/ml containing 0.003 mM NaHCO₃.

Solubility

It is recommended to reconstitute the lyophilized pegylated Interleukin-22 in sterile 0.4% NaHCO₃ adjusted to pH 8-9 not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized pegylated IL-22, although stable at room temperature for several days, should be stored desiccated below -20°C. Upon reconstitution at 0.1 mg/ml pegylated mouse IL-22 and up to 2 mg/ml, filter and sterilized, the protein can be stored at 4°C for several weeks making it suitable for long term infusion studies using osmotic pumps. At lower concentration addition of a carrier protein (0.1% HSA or BSA) is suggested. Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by (a) Analysis by Gel-Filtration. (b) Analysis by SDS-PAGE.

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**Activity**

The ED50 as determined by STAT3 phosphorylation assay in HepG cells. The activity in vitro was found to be ~10% compared to the non-pegylated mouse IL-22.

Usage

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