Recombinant Mouse Interleukin-22 (IL22)

(Cat. No.: C047)

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 (aa) residue protein with a putative 33 aa 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-10Rβ (previously known as CRF2-4), belonging to the class II cytokine receptor family

Description:

Recombinant Mouse IL-22 produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 147 amino acids and having a molecular mass of 16.7 kDa.

Quality Control:

Biological activity: Recombinant Human IL-22 is fully biologically active when compared to standard. The ED50 as determined by its ability to induce IL-10 secretion in Colo205 cells is less than 0.5ng/ml, corresponding to a Specific Activity of 2.0×10^6 IU/mg.

Purity: Greater than 97.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

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

Endotoxin: Less than 0.1ng/μg (1IEU/μg) determined by LAL test.

Formulation: rmIL-22 was lyophilized after extensive dialysis against PBS.

Storage: Lyophilized rmIL-22 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rmIL-22 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.

Reconstitution: It is recommended to reconstitute the lyophilized rmIL-22 in sterile 18MΩ-cm H_2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.