

Interleukin-22

Mouse, Recombinant (rmIL-22)

Expressed in *E. coli*

Cat. No. CRP0833

Lot. No. (See product label)

PRODUCT INFORMATION

Description: 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-10R β (previously known as CRF2-4), belonging to the class II cytokine receptor family

Amino-Acid Sequence: 147aa (The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Ala-Pro-Tyr-Thr.), non-glycosylated.

M. W. : 16,700 Da

Recombinant: Expressed in *E. coli*

Purity: >97% as determined by RP-HPLC and SDS-PAGE .

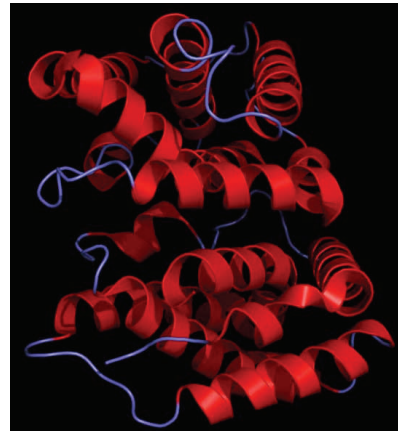
Formulation: rmIL-22 was lyophilized after extensive dialysis against PBS.

Specific Activity: Recombinant Mouse 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.

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

Reconstitution: It is recommended to reconstitute the lyophilized rmIL-22 in sterile 18M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

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). Aliquot to avoid repeated freeze-thaw cycles.



Crystal structure of IL-22.

GENE INFORMATION

Gene Name: [IL22](#)

Gene Alias: IL-22, IL-TIF, Iltif

Gene Type: protein coding

mRNA Refseq: [NM_016971.1](#)

Protein Refseq: [NP_058667.1](#)

MIM: [605330](#)

GeneID: [50929](#)

Chromosome Location: 10 67.0 cM

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

Function: cytokine activity; protein binding

REFERENCES

1. Aujla SJ, Chan YR. IL-22 mediates mucosal host defense against Gram-negative bacterial pneumonia. *Nat. Med.* 2008 Mar; 14(3): 275-281
2. Zheng Y, Valdz PA, Interleukin-22 mediates early host defense against attaching and effacing bacterial pathogens. *Nat. Med.* 2008 Mar; 14(3): 282-289
3. Ma HL, Liang S. IL-22 is required for Th17 cell-mediated pathology in a mouse model of psoriasis-like skin inflammation. *J Clin. Invest.* 2008 Feb; 118(2): 597- 607

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