



Product Information

Interleukin-22

Human, Recombinant
Expressed in *E. coli*

Product Number **I 4282**

Product Description

Recombinant Human Interleukin-22 (IL-22)¹ is produced from a DNA sequence encoding the mature human IL-22 protein sequence (Ala 34 - Ile 179). The protein is expressed in *Escherichia coli*. The methionyl form of recombinant human IL-22 (147 amino acids) has a predicted molecular mass of approximately 16.5 kDa.

Interleukin-22 (IL-22), also known as IL-10-related T cell-derived inducible factor (IL-TIF), was originally identified as a gene induced by IL-9 in mouse T cells and mast cells.² Human IL-22 cDNA encodes a 179 amino acid residue protein with a putative signal peptide (33 amino acids) that is cleaved to generate a 147 amino acid mature protein. Mature human IL-22 shares approximately 79% and 22% amino acid sequence identity with mouse IL-22 and human IL-10, respectively. The human IL-22 gene is localized to chromosome 12q15.

IL-22 activates STAT1 and STAT3 in several hepatoma cell lines and upregulates the production of acute phase proteins. In humans, IL-22 is produced by normal T cells upon anti-CD3 stimulation.

The IL-22 receptor complex consists of two receptor subunits, IL-22 R (formerly an orphan receptor named CRF2-9) and IL-10 R β (formerly known as CRF2-4), belonging to the class II cytokine receptor family.^{3,4}

Reagent

Recombinant Human Interleukin-22 is supplied as approximately 10 μ g of protein lyophilized from a 0.2 μ m filtered solution in phosphate buffered saline (PBS) containing 0.5 mg of bovine serum albumin.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 μ m filtered phosphate buffered saline containing at least 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 10 μ g/ml.

Storage/Stability

Store at -20°C . Upon reconstitution and for extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a "frost-free" freezer.

Product Profile

Recombinant Human Interleukin-22 is measured by its ability to induce STAT3 activation in human HepG2 cells.

Approximately 10 ng/ml is recommended to effectively induce STAT3 activation.

Purity: > 95% as determined by SDS-PAGE, visualized by silver stain.

Endotoxin level is < 1.0 EU (endotoxin units) of cytokine as determined by the LAL (*Limulus* amoebocyte lysate) method.

References

1. Dumoutier, L., et al, Proc. Natl. Acad. Sci. USA, **97**, 10144-10149 (2000).
2. Dumoutier, L., et al., J. Immunol., **164**, 1814-1819 (2000).
3. Xie, M.H., et al., J. Biol. Chem., **275**, 31335-31344 (2000).
4. Kotenko, et al., J. Biol. Chem., **276**, 2725-2732 (2001).

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