

Recombinant Human Interleukin-2

Human, Recombinant (IL2)

Expressed in *E. coli*

Cat. No. CRP0810

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Recombinant Human interleukin-2 is a highly purified protein with a molecular weight of approximately 15,300 Daltons. The chemical name is des-alanyl-1, serine-125 human interleukin-2. It is produced by recombinant DNA technology using a genetically engineered *E. coli* strain containing an analog of the human interleukin-2 gene. Genetic engineering techniques were used to modify the human IL-2 gene, and the resulting expression clone encodes a modified human IL-2. This recombinant form differs from native interleukin-2 in following ways: 1) it is not glycosylated; 2) the molecule has no N-terminal alanine; 3) the molecule has serine substituted for cysteine at amino acid position 125; 4) the aggregation state of molecule is likely to be different from that of native IL-2.

Amino-Acid Sequence: The sequence of the first fifteen N-terminal amino acids was determined and was found to be Met-Ala-Pro-Thr-Ser-Ser-Ser-Thr-Lys-Lys-Thr-Gln-Leu- Gln-Leu-Glu. , non-glycosylated.

M. W. : 15,300 Da

Recombinant: Expressed in *E. coli*

Purity: >95% as determined by SDS-PAGE and SEC-HPLC.

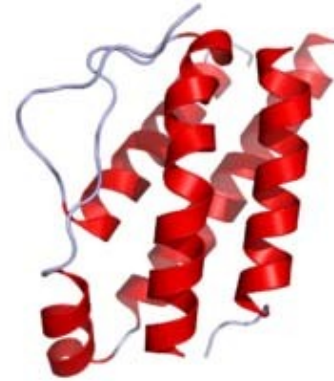
Formulation: The protein (1.1mg/ml) was lyophilized after extensive dialysis against 0.17mg sodium monobasic and 0.89mg dibasic sodium phosphate buffer to a pH=7.5.

Specific Activity: The ED50 as determined by the dose-dependant stimulation of murine CTLL-2 cells is less than 0.1 ng/ml, corresponding to a Specific Activity of 1.0×10^7 IU/ mg.

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

Reconstitution: It is recommended to reconstitute the lyophilized rHuIL-2 in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Storage: Lyophilized BMP2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BMP2 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.



Human Interleukin 2 crystal structure

GENE INFORMATION

Gene Name: [IL2](#)

Gene Alias: IL-2; TCGF; lymphokine; T-cell growth factor; Aldesleukin, Interleukin-2; interleukin-2 precursor; involved in regulation of T-cell clonal expansion; IL2; interleukin 2

mRNA Refseq: [NM_000586](#)

Protein Refseq: [NP_000577](#)

MIM: [147680](#)

GeneID: [3558](#)

UniProt ID: P60568

Chromosome Location: 4q26-q27

Pathway: Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; T cell receptor signaling pathway; Type I diabetes mellitus

Function: interleukin-2 receptor binding; kinase activator activity

REFERENCES

- 1.Gordon J, Maclean LD. A Lymphocyte-stimulating Factor produced in vitro. *Nature*. 1965. 208: 795–796
- 2.Robb R, Smith KA. Heterogeneity of human T-cell growth factor(s) due to variable glycosylation. *Mol. Immunol*. 1981. 18: 1087–1094
- 3.Smith KA, Favata MF, Oroszlan S. Production and characterization of monoclonal antibodies to human interleukin 2: strategy and tactics. *J. Immunol*. 1983; 131: 1808

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