

## 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.

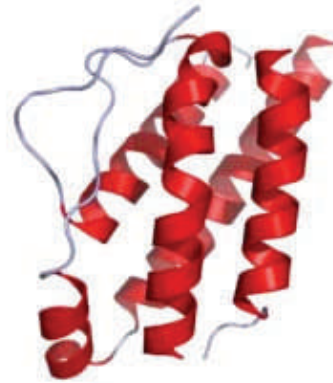
**Formulation:** The protein (1.1mg/ml) was lyophilized after extensive dialysis against 0.17mg sodium monobasic and 0.89mg dibasic sodium phosphate buffer to a pH=7.5.

**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  $1.0 \times 10^7$  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 H<sub>2</sub>O 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

**Gene Type:** protein coding

**mRNA Refseq:** [NM\\_000586](#)

**Protein Refseq:** [NP\\_000577](#)

**MIM:** [147680](#)

**GeneID:** [3558](#)

**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

#### FOR RESEARCH USE ONLY

2005-2008 Creative Biolabs. All rights reserved.