

IL-2

Interleukin 2, T-cell growth factor
human, recombinant, *E. coli*

Cat. No.	Amount
PR-461	50 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized from sodium phosphate buffer pH 7.5.

Solubility

It is recommended to reconstitute the lyophilized IL-2 in 20 mM acetic acid not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

ED₅₀: < 0.0645 ng/ml, corresponding to a specific activity of 1.7 x 10⁷ IU/mg, determined by the dose-dependent stimulation of murine CTLL-2 cells.

Molecular Weight

15.5 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

IL-2 is only produced by activated T-cells, especially the CD4+ T-helper cell population, although CD8+ Cytotoxic cells can be stimulated *in vitro* to produce IL-2.

It is a potent immunomodulator, and has an important role in both the activation and maintenance of an immune response and in lymphocyte development. Interleukin-2 serves to activate numerous key cells in the immune system, including helper T cells, cytotoxic T cells, B lymphocytes, natural killer cells, tumor infiltrating lymphocytes and macrophage-monocyte cells.

Recombinant human IL-2 produced in *E. coli* is a single, non-glycosylated form of human IL-2 polypeptide chain containing 134 amino acids and having a molecular mass of 15.52 kDa.

Our IL-2 has an Ser substitute for Cysteine at position 126.

Amino acid sequence

The sequence of the first five N-terminal amino acids was found to be Met-Ala-Pro-Thr-Ser.

Selected References:

- Church (2003) Clinical advances in therapies targeting the interleukin-2 receptor. *QJM*. **96**:91.
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- Cherenova *et al.* (2004) Recombinant avian adenovirus CELO expressing the human interleukin-2: characterization *in vitro*, *in ovo* and *in vivo*. *Virus Res*. **100**:257.
- Kimmick *et al.* (2004) Subcutaneously administered recombinant human interleukin-2 and interferon alfa-2a for advanced breast cancer: a phase II study of the Cancer and Leukemia Group B (CALGB 9041). *Invest. New Drugs*. **22**:83.
- Chu *et al.* (2003) [A controlled clinical study on the efficacy of recombinant human interleukin-2 in the treatment of pulmonary tuberculosis] *Zhonghua Jie He He Hu Xi Za Zhi*. **26**:548.
- Klimka *et al.* (2003) Construction of proteolysis resistant human interleukin-2 by fusion to its protective single chain antibody. *Cytokine*. **22**:134.
- De Boer *et al.* (2003) A randomized controlled trial evaluating the efficacy and safety of intermittent 3-, 4-, and 5-day cycles of intravenous recombinant human interleukin-2 combined with antiretroviral therapy (ART) versus ART alone in HIV-seropositive patients with 100-300 CD4+ T cells. *Clin. Immunol.* **106**:188.