

Recombinant Porcine Interleukin-2 (rp IL-2)

Synonyms: T-cell growth factor (TCGF), Aldesleukin, Lymphokine.

Introduction: IL-2 is a secreted cytokine that is important for the proliferation of T and B lymphocytes. The receptor of this cytokine is a heterotrimeric protein complex whose gamma chain is also shared by Interleukin 4 (IL-4) and Interleukin 7 (IL-7). The expression of this gene in mature thymocytes is monoallelic which represents an unusual regulatory mode for controlling the precise expression of a single gene. The targeted disruption of a similar gene in mice leads to ulcerative colitis-like disease, which suggests an essential role of this gene in the immune response to antigenic stimuli.

Description: Porcine Recombinant Interleukin 2 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 134 amino acids and having a molecular mass of 15217 Dalton. The rp IL-2 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a concentrated (1 mg/ml) solution in water containing no additives. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized IL-2 in sterile 20mM AcOH (acetic acid) not less than 100µg/ml which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rp IL-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C . Upon reconstitution rp IL-2 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). Please prevent freeze-thaw cycles.

Purity: Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

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

Biological Activity: The ED₅₀ as determined by the dose-dependant murine CTLL cells proliferation assay with MTS detection is < 0.1 ng/ml, corresponding to a Specific Activity of 1x 10⁷ IU/mg.

Protein content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.714 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of IL-2 as a Reference Standard.

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<i>small</i>	2 µg	Cat.N°	16340022
<i>medium</i>	10 µg	Cat.N°	16340033

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