

IL-4

Interleukin 4, B-cell stimulatory factor human, recombinant, *E. coli*

Cat. No.	Amount
PR-463	10 µg

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

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized IL-4 in bidest H₂O 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: < 0.2 ng/ml, corresponding to a specific activity of 5 x 10⁵ IU/mg, determined by the dose-dependent stimulation of TF-1 cells.

Endotoxin

Less than 0.1 ng/µg (IEU/µg) of IL-4.

Molecular Weight

15 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

The anti-inflammatory cytokine Interleukin-4 is involved in the regulation of inflammatory responses by promoting the differentiation of naïve T-cells to T helper type 2 (Th2) cells. A key anti-inflammatory action of IL-4 results from its ability to inhibit the release of pro-inflammatory cytokines by innate immune cells and to upregulate the synthesis of IL-1 receptor antagonist.

IL-4 has been demonstrated to be a potent cofactor for B and T lymphocyte proliferation and differentiation. Recombinant human IL-4 produced in *E. coli* is a single, non-glycosylated form of human IL-4 polypeptide chain containing 130 amino acids and having a molecular mass of 15 kDa. IL-4 is purified by proprietary chromatographic techniques.

Selected References:

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- Whitehead *et al.* (2002) Phase II trial of recombinant human interleukin-4 in patients with advanced renal cell carcinoma: a southwest oncology group study. *J. Immunother.* **25**:352.
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- Casolaro *et al.* (2000) Identification and characterization of a critical CP2-binding element in the human interleukin-4 promoter. *J. Biol. Chem.* **275**:36605.
- Davis *et al.* (2000) A phase I and pharmacokinetic study of subcutaneously-administered recombinant human interleukin-4 (rhIL-4) in patients with advanced cancer. *Growth Factors.* **17**:287.
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