

IL-4

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

Cat. No.	Amount
PR-464	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: < 2 ng/ml, determined by the dose-dependent proliferation of murine HT-2 cells.

Endotoxin

Less than 0.1 ng/µg (IEU/µg) of IL-4.

Purity

≥ 98% by SDS-PAGE, RP-HPLC, and FPLC.

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 murine IL-4 produced in *E. coli* is a single, non-glycosylated form of murine IL-4 polypeptide chain containing 120 amino acids and having a molecular mass of 13.5 kDa.

IL-4 is purified by proprietary chromatographic techniques.

Selected References:

- Wurster et al. (2002) Interleukin-4-mediated protection of primary B cells from apoptosis through Stat6-dependent up-regulation of BclxL. *J. Biol. Chem.* **277**:27169.
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- Yatsenko et al. (2004) Alternative splicing of murine interleukin-4 mRNA. *Bull. Exp. Biol. Med.* **137**:179.
- Walz et al. (2002) A murine interleukin-4-Ig fusion protein regulates the expression of Th1- and Th2-specific cytokines in the pancreas of NOD mice. *Horm. Metab. Res.* **34**:561.
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- Missol-Kolka E. and Sochanik A. (1998) Combined therapy of B16(F10) murine melanoma using *E. coli* cytosine deaminase gene and murine interleukin-4 gene. *Neoplasma.* **45**:305.