Data sheet

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Jena Bioscience

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 H_2O 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
ED_{50}: < 2 ng/ml, determined by the dosedependent proliferation of murine HT-2 cells.

Endotoxin
Less than 0.1 ng/μg (IEU/μg) of IL-4.

Molecular Weight
13.5 kDa

Purity
$\geq$ 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 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:

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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 *et al.* (1998) Combined therapy of B16(F10) murine melanoma using E. coli cytosine deaminase gene and murine interleukin-4 gene. *Neoplasma.* **45**:305.