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Human IL-4 Recombinant Protein

20 µg

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
15.1**UniProt ID:**
#P05112**Entrez-Gene Id:**
3565

Background

Interleukin-4 (IL-4) is a cytokine secreted by activated T cells, basophils, and mast cells (1,2). While it contributes to many immunomodulatory responses, it is mainly recognized as the cytokine responsible for eliciting differentiation of naive T cells into Th2 lineage cells that are defined by their secretion of IL-4, IL-5, and IL-10 (3). In addition, IL-4 contributes to immunoglobulin class switching by inducing the production of IgE from B cells (4,5). IL-4 acts through the IL-4 receptor, leading to tyrosine phosphorylation and activation of the Stat6 transcription factor (6).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-4.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human IL-4 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hIL-4 was determined in a TF-1 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 0.25 ng/mL.

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Background References

1. Yokota, T. et al. (1986) *Proc Natl Acad Sci USA* 83, 5894-8.
2. Grabstein, K. et al. (1986) *J Exp Med* 163, 1405-14.
3. Kopf, M. et al. (1993) *Nature* 362, 245-8.
4. Kotowicz, K. and Callard, R.E. (1993) *Eur J Immunol* 23, 2250-6.
5. Thyphronitis, G. et al. (1989) *Proc Natl Acad Sci USA* 86, 5580-4.
6. Hou, J. et al. (1994) *Science* 265, 1701-6.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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