

Recombinant human IL-4

E. coli expressed human interleukin-4 with HSA

Catalog code: rcyec-hil4

<https://www.invivogen.com/human-il4>

For research use only, not for diagnostic or therapeutic use

Version 22H30-MM

PRODUCT INFORMATION

Contents:

- 10 µg of recombinant human IL-4 provided as a white lyophilized powder
 - 1.5 ml endotoxin-free water
- Note: Recombinant human IL-4 is sterile filtered prior to lyophilization.

Storage and stability

- Recombinant human IL-4 is shipped at room temperature. Upon receipt, it should be stored at -20 °C.
 - Upon resuspension, prepare aliquots of recombinant human IL-4 and store at 4 °C for 1 week or at -20 °C to -80 °C for 12 months.
- Note: Avoid repeated freeze-thaw cycles.

Quality control

- Purity greater than 98% as determined by:
 - (a) Analysis by HPLC
 - (b) Analysis by SDS-PAGE
- Endotoxin: Less than 0.1 EU/µg as determined by the LAL method.
- The biological activity has been confirmed using HEK-Blue™ IL-4/IL-13 cells.

BACKGROUND

Interleukin-4 (IL-4) is a cytokine that plays an important role in regulating inflammation and immune responses. It induces the differentiation of naïve helper T cells to Th2 cells. This cytokine binds the IL-4 receptor that also binds another cytokine interleukin 13 (IL-13), which may explain the overlapping functions of IL-4 and IL-13^{1,2}.

Recombinant human IL-4 is intended for use in cell culture applications. It is produced in *E. coli*.

1. Kasaian MT. *et al.*, 2013. An IL-4/IL-13 dual antagonist reduces lung inflammation, airway hyperresponsiveness, and IgE production in mice. *Am J Respir Cell Mol Biol.* 49(1):37-46. 2. David M. *et al.*, 2003. Functional characterization of IL-13 receptor $\alpha 2$ gene promoter: a critical role of the transcription factor STAT6 for regulated expression. *Oncogene* 22, 3386-3394.

CHARACTERISTICS

Source: *E. coli*

Accession number: P05112

UniProt ID: P05112

Molecular mass: ~ 15 kDa

Formulation: Recombinant human IL-4 was lyophilized from a 0.2 µm filtered phosphate buffer solution (pH 7.4) containing human serum albumin (HSA).

Bioactivity: The ED50 as determined by a cell proliferation assay using human TF-1 cells is less than 0.2 ng/ml, corresponding to a specific activity of $> 5.0 \times 10^6$ IU/mg.

Solubility: 100 µg/ml in water

METHOD

Preparation of stock solution (100 µg/ml)

1. Add 100 µl endotoxin-free water (provided) to 10 µg of recombinant human IL-4.
2. Mix by pipetting. Do not vortex.
3. Prepare aliquots of recombinant human IL-4 and store at 4 °C for 1 week or at -20 °C to -80 °C for 12 months. Avoid freeze-thaw cycles.
4. Further dilutions can be prepared in the appropriate aqueous buffer, such as cell culture medium containing serum.

RELATED PRODUCTS

Product	Description	Cat. Code
HEK-Blue™ IL-4/IL-13 Cells	IL-4/IL-13 reporter cells	hkb-il4il13

TECHNICAL SUPPORT

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