



IL-4, recombinant Human

Cat#NB-50-0177

Description :

IL-4 is a pleiotropic cytokine that regulates diverse T and B cell responses including cell proliferation, survival and gene expression. Produced by mast cells, T cells and bone marrow stromal cells, IL-4 regulates the differentiation of naive CD4+ T cells into helper Th2 cells, characterized by their cytokine-secretion profile that includes secretion of IL-4, IL-5, IL-6, IL-10, and IL-13, which favor a humoral immune response. Another dominant function of IL-4 is the regulation of immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells has been associated with elevated IgE production and allergy. Recombinant Human IL-4 is a 15.1 kDa globular protein containing 130 amino acid residues

Product information :

Source: E.coli

Synonyms: Interleukin-4, BCGF, BCDF, B-cell Stimulating Factor (BSF-1)

Sequence: MHKCDITLQE IIKTLNSLTE QKTLCTELTV TDIFAASKNT TEKETFCRAA
TVLRQFYSHH EKDTRCLGAT AQQFHRHKQL IRFLKRLDRN LWGLAGLNSC
PVKEANQSTL ENFLERLTKTI MREKYSKCSS

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Storage and handling :

- Handling:** Centrifuge vial prior to opening. Do not vortex after reconstitution. Avoid repeated freeze-thaw cycles.
- Reconstitution:** Initially reconstitute in water to 0.1-1.0 mg/ml. Store at 2°C to 8°C for up to 1 week or prepare for extended storage.
- Extended Storage:** After initial reconstitution, further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA). Store working aliquots at -20°C to -80°C

Product Form	Temperature	Storage Time
Lyophilized	-20°C to -80°C	December 2024
Lyophilized	4°C	12 months
Lyophilized	Room Temperature	1 month
Reconstituted	2°C to 8°C	1 week
Extended Storage	-20°C to -80°C	12 months

Specifications :

Formulation : Sterile filtered through a 0.2-micron filter. Lyophilized with no additives.

Authenticity: Verified by N-terminal and Mass Spectrometry analyses (when applicable).

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Purity : $\geq 98\%$ by SDS-PAGE gel and HPLC analyses.

Endotoxin : Endotoxin level is $< 0.1 \text{ ng}/\mu\text{g}$ of protein ($< 1 \text{ EU}/\mu\text{g}$).

Protein

Content : Verified by UV Spectroscopy and/or SDS-PAGE gel.

**Biological
Activity :**

Determined by its ability to stimulate the proliferation of human TF-1 cells. The expected **ED**₅₀ is $\leq 0.2 \text{ ng/ml}$, corresponding to a specific activity of $\geq 5 \times 10^6 \text{ units/mg}$.