

Human IL-4, cct-premium

Human Interleukin-4, recombinant, cct-premium

Synonyms: IL4, BCGF, BCDF, B cell stimulating factor (BSF-1)

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
5 µg	1515.950.005		
25 µg	1515.950.025		
50 µg	1515.950.050		
100 µg	1515.950.100		
200 µg	1515.950.200		
500 µg	1515.950.500		
1 mg	1515.950.199		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant human Interleukin-4, cct-premium is a 14.9 kDa globular protein containing 130 amino acid residues. 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 naïve CD4+ T cells into helper Th2 cells, characterized by their cytokine-secretion profile that includes secretion of IL-4, IL-5, IL-6, and IL-13, which favour 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.

- **Biological Activity** ≥ 8 x 10⁶ IU/mg
- **Source** *E. Coli*
- **Purity** ≥ 98 % (SDS-PAGE, silver stained)
- **Endotoxin level** ≤ 0.01ng/µg (≤ 0.1EU/µg)
- **Stabilizer** None
- **Buffer** PBS*
- **Physical state** Sterile filtered, lyophilized

Biological Activity

The ED₅₀ of ≤ 0.12 ng/ml was determined by the dose-dependent stimulation of the proliferation of human TF-1 cells. In direct comparison with the WHO standard (NIBSC 88/656) it corresponds to a specific activity of ≥ 8 x 10⁶ IU/mg.

Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration of at least 0.1mg/ml. This solution can then be diluted into other aqueous buffers and stored at 4°C for 1 week or -20°C for future use.

Stability

The lyophilized protein is stable for at least 2 years from date of receipt at -20°C. Reconstituted IL-4 is stable for at least 3 months when stored in working aliquots with a carrier protein at -20°C. **Please avoid repeated freeze-thaw cycles.**

Amino Acid Sequence

MHKCDITLQE IIKTLNSLTE QKTLCTELTV TDIFAASKNT TEKETFCAA TVLRQFYSHH EKDTRCLGAT
 AQQFHRHKQL IRFLKRLDRN LWGLAGLNSC PVKEANQSTL ENFLERLTKI MREKYSKCSS

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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Purity and Biological Activity of Human IL-4, cct-premium

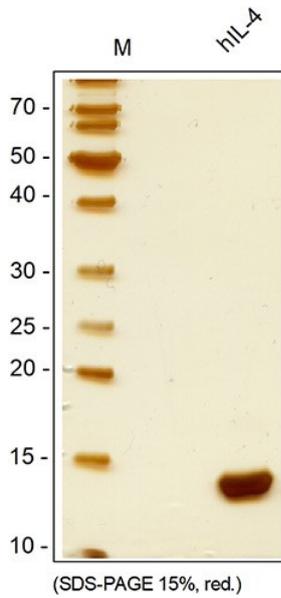


Fig. 1: SDS-PAGE analysis of recombinant human IL-4, cct-premium. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Silver staining.

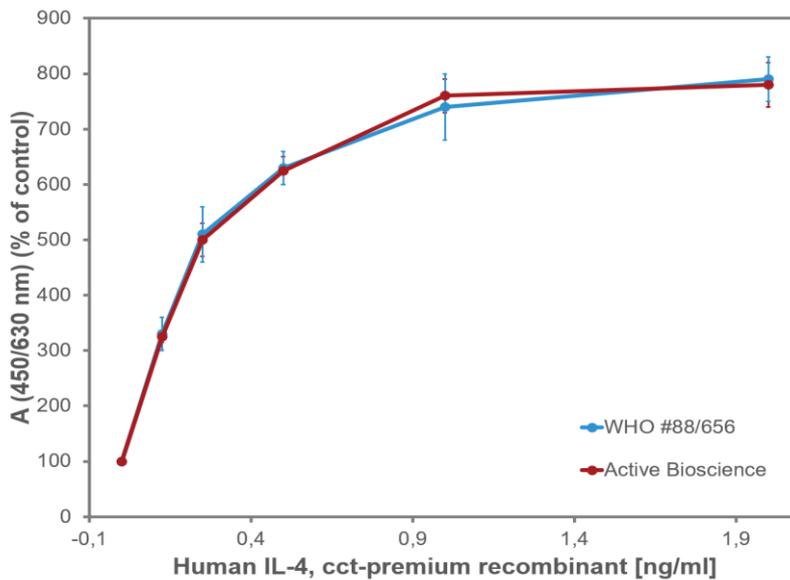


Fig. 2: Proliferation assay with TF-1 cells. The cells were stimulated using recombinant human IL-4, cct-premium and the WHO standard 88/656. The cells were stimulated with increasing amounts of the recombinant proteins. Values are the means (\pm SD) of triplicate determinations and expressed as percentage of control.

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

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