

Active Recombinant Human IL4 Protein (His25-Ser153), GMP Grade, Animal-Free

Cat. No. IL4-25HG **Lot. No.** (See product label)

SPECIFICATION

Product Overview	GMP recombinant human IL-4 protein (His25-Ser153) with an N-terminal Met was expressed in E. coli, produced in an Animal-Free laboratory and manufactured and tested under cGMP guidelines.
Species	Human
Source	E.coli
ProteinLength	His25-Ser153
Description	The protein encoded by this gene is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. IL4 is considered an important cytokine for tissue repair, counterbalancing the effects of proinflammatory type 1 cytokines, however, it also promotes allergic airway inflammation. Moreover, IL-4, a type 2 cytokine, mediates and regulates a variety of human host responses such as allergic, anti-parasitic, wound healing, and acute inflammation. This cytokine has been

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reported to promote resolution of neutrophil-mediated acute lung injury. In an allergic response, IL-4 has an essential role in the production of allergen-specific immunoglobulin (Ig) E. This pro-inflammatory cytokine has been observed to be increased in COVID-19 (Coronavirus disease 2019) patients, but is not necessarily associated with severe COVID-19 pathology. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

Bio-activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 0.05-0.2 ng/mL. The specific activity of recombinant human IL-4 is $>1.0 \times 10^7$ IU/mg, which is calibrated against the human IL-4 WHO International Standard.
Molecular Mass	Predicted Molecular Mass: 15.1 kDa SDS-PAGE: 14 kDa, reducing conditions
N-terminal Sequence Analysis	Met-His25-Lys-(Cys)-Asp-Ile-Thr-Leu-Gln-Glu
Endotoxin	<0.10 EU/ μ g of the protein by the LAL method.
Purity	$>97\%$, by SDS-PAGE under reducing conditions and visualized by silver stain.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 12 months when stored at ≤ -20 centigrade as supplied. Refer to lot specific COA for the Use by Date. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, ≤ -20 centigrade under sterile conditions after reconstitution.
Storage Buffer	Lyophilized from a 0.2μ m filtered solution in PBS.
Reconstitution	Reconstitute at 100-200

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µg/mL in PBS.

Shipping

The product is shipped with polar packs.

GENE INFORMATION
Gene Name

IL4 interleukin 4 [Homo sapiens]

Official Symbol

IL4

Synonyms

IL4; interleukin 4; interleukin-4; B cell growth factor 1; B_cell stimulatory factor 1; BCGF 1; BCGF1; BSF1; IL 4; lymphocyte stimulatory factor 1; MGC79402; binetrakin; pitrakinra; IL-4; BSF-1; BCGF-1;

Gene ID

3565

mRNA Refseq

NM_000589

Protein Refseq

NP_000580

MIM

147780

UniProt ID

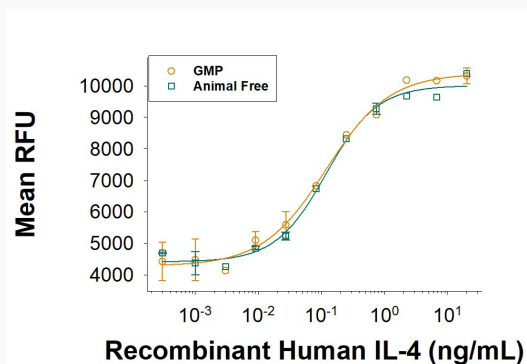
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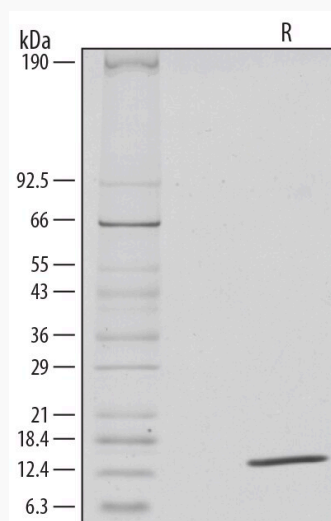
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Bioactivity



SDS-PAGE

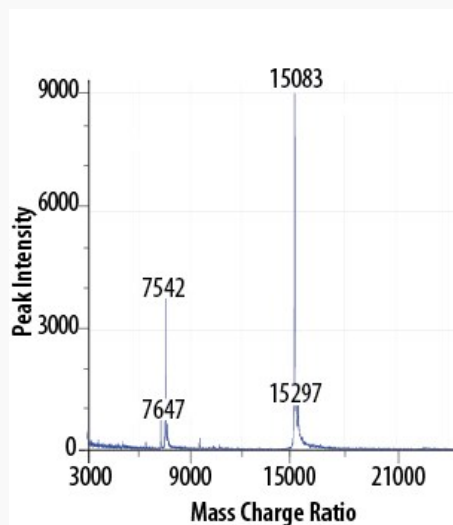


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Mass Spectrometry



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