

# Active Recombinant Human interleukin 4 Protein, Tag Free

Cat. No. IL4-158H Lot. No. (See product label)

## SPECIFICATION

**Product Overview** Recombinant human IL-4 protein (P05112) (His 25-Ser 163) without tag was expressed in HEK293.

**Species** Human

**Source** HEK293

**ProteinLength** 25-163aa

### Description

Cytokine secreted primarily by mast cells, T-cells, eosinophils, and basophils that plays a role in regulating antibody production, hematopoiesis and inflammation, and the development of effector T-cell responses. Induces the expression of class II MHC molecules on resting B-cells. Enhances both secretion and cell surface expression of IgE and IgG1. Regulates also the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4. In addition, plays a critical role in higher functions of the normal brain, such as memory and learning. Upon binding to IL4, IL4R receptor dimerizes either with the common IL2R gamma chain/IL2RG to produce the type 1 signaling complex, located mainly on hematopoietic cells, or with the IL13RA1 to produce the type 2 complex, which is expressed also on nonhematopoietic cells. Engagement of both types of receptors initiates JAK3 and to a lower extend JAK1 phosphorylation leading to activation of the signal transducer and activator of transcription 6/STAT6.

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<b>Tag</b>	Non
<b>Bio-activity</b>	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 0.01-0.1 ng/mL.
<b>Molecular Mass</b>	15 kDa
<b>Endotoxin</b>	Less than 1.0 EU/μg by the LAL method.
<b>Purity</b>	>95% as determined by SDS-PAGE.
<b>Storage</b>	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.
<b>Storage Buffer</b>	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
<b>Reconstitution</b>	Reconstitute at 250 μg/mL in sterile water.

## GENE INFORMATION

<b>Gene Name</b>	IL4 interleukin 4 [ Homo sapiens (human) ]
<b>Official Symbol</b>	IL4
<b>Synonyms</b>	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;
<b>Gene ID</b>	3565

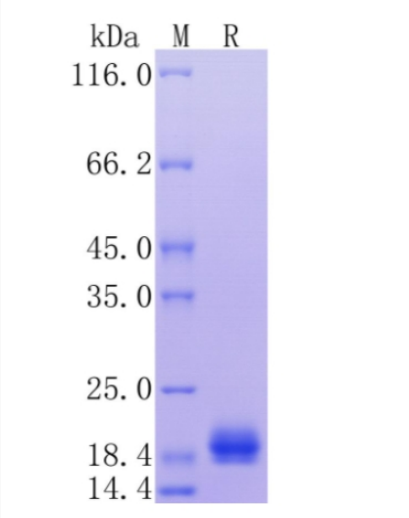
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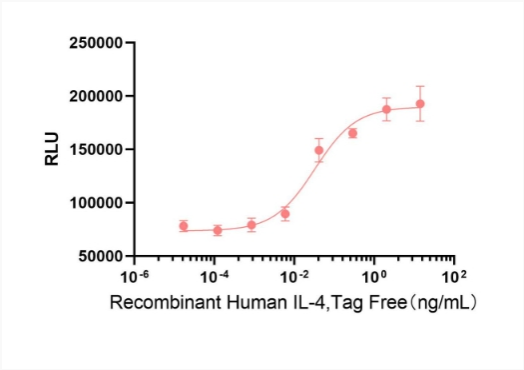
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mRNA Refseq	NM_000589
Protein Refseq	NP_000580
MIM	147780
UniProt ID	P05112

**Protein on SDS-PAGE under reducing (R) condition.**



**Activity**



Recombinant Human IL-4, Tag Free (ng/mL)	RLU
10 <sup>-6</sup>	~75,000
10 <sup>-5</sup>	~75,000
10 <sup>-4</sup>	~75,000
10 <sup>-3</sup>	~80,000
10 <sup>-2</sup>	~150,000
10 <sup>-1</sup>	~180,000
10 <sup>0</sup>	~190,000
10 <sup>1</sup>	~195,000
10 <sup>2</sup>	~195,000

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