

Active Recombinant Human IL4, His-tagged

Cat. No. IL4-27H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human IL4 was produced in the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Human
Source	Barley Grain
Description	IL-4 (Interleukin 4, B cell stimulatory factor) is a pleiotropic cytokine produced by activated T cells, mast cells and basophils. IL-4 has many different functions including promoting proliferation and differentiation of immunologically competent cells. One of its main functions is regulating differentiation of naive CD4+ T cells into helper Th2 cells, the other main function is regulating B cells IgE and IgG1 production. Human IL-4 shows 50% homology with mouse IL-4, but its activities are species-specific and human IL-4 shows no activity on murine and rat cells.
Form	Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH7.2
Bio-activity	Recombinant human IL-4 was determined by its dose-dependent effects on the proliferation of TF-1 cells. The ED50 value for this effect is typically < 0.3 ng/ml, corresponding to a specific activity > 3.3 x 10 ⁶ units/mg. Optimal concentration should be determined for specific applications and cell lines.
Molecular Mass	Recombinant human IL-4 contains 130 amino acids and a 16 a.a. Histidine-based tag for a total length of 146 a.a. and has a predicted molecular mass of 17.2 kDa. Due to glycosylation the recombinant protein migrates as smeary band with an apparent

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	molecular mass of 23 kDa in SDS-PAGE.
Endotoxin	Endotoxin level is less than 0.005ng per µg of product (<>)
Purity	Greater than 95% by SDS-PAGE gel analysis.
Storage	The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile low salt buffer to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

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

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MIM	147780
UniProt ID	P05112
Chromosome Location	5q23-q31
Pathway	Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem; Asthma, organism-specific biosystem; Asthma, conserved biosystem; Autoimmune thyroid disease, organism-specific biosystem; Autoimmune thyroid disease, conserved biosystem; CD40/CD40L signaling, organism-specific biosystem;
Function	cytokine activity; growth factor activity; interleukin-4 receptor binding; protein binding;

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