

Interleukin-12

Human, Recombinant (rHuIL-12)

Expressed in CHO cells

Cat. No. CRP08147

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Interleukin-12 (IL-12), as a potent factor, plays an important role in the networks of immune system. It is a multifunctional cytokine, the properties of which bridge innate and adaptive immunity, acting as a key regulator of cell-mediated immune responses through the induction of T helper 1 differentiation. By promoting IFN- γ production, proliferation, and cytolytic activity of natural killer and T cells, IL-12 induces cellular immunity. IL-12 not only can facilitate the maturation of antigen presenting cells (APC), especially for dendritic cells (DC), but also can be the third signal to change properties of CD8 T cells and increase generation of effector and memory cells. Treatment with IL-12 can inhibit bacterial, virus and intracellular parasites, produce an effect of anti-tumor, and enhance autoimmunity. rHuIL-12 is a heterodimeric cytokine composed of covalently disulfide linked a light chain of p35 (P35, IL-12 α) and a heavy chain of p40 (P40, IL-12 β) with PI 4.5-5.5. Specifically, the heavy chain (P40) is consisted of 306 amino acids, while the light chain (P35) compounds 197 amino acids.

M.W.: Approximately 75 kDa

Recombinant: Expressed in CHO cells

Purity: Greater than 98% by SDS-PAGE gel and HPLC analyses.

Specification: 10 μ g/bottle. Any other specifications, please feel free to contact us.

Formulation: Sterile filtered through 0.2 micron filter, added the human serum albumin and mannitol and then lyophilized from 10mMPBS, pH=7.2.

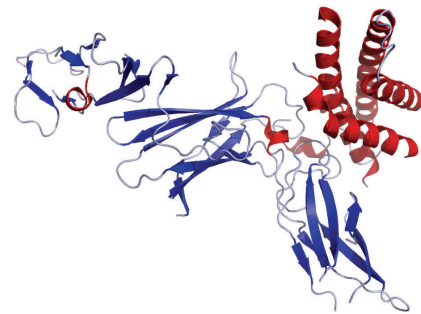
Specific Activity: The ED₅₀ was determined by the stimulation of IFN- γ production by human peripheral blood mononuclear cells co-stimulated with IL-12 is \leq 5ng/ml, corresponding to a specific activity of \geq 8000 units/ μ g.

Endotoxin: Endotoxin level is less than 1 EU/ μ g.

Reconstitution: Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 1ml. This solution can then be diluted into other aqueous buffers and stored at 4°C for 1 day or -20°C for future use.

Storage: The lyophilized is stable for 3 months at room temperature, can be stored for 2 years at 4°C, but best stored at -20°C. Reconstituted IL-12 should be stored in working aliquots at -20°C.

FOR RESEARCH USE ONLY



Crystal structure of human IL-12 .From [PDB](#)

GENE INFORMATION

Gene Name: [IL12A](#)

Gene Alias: P35; CLMF; NFSK; NKSF1; IL-12A

Gene Type: protein coding

mRNA Refseq: [NM_000882.2](#)

Protein Refseq: [NP_000873.2](#)

MIM: [161560](#)

GeneID: [3592](#)

Chromosome Location: 3q25.33-q26

Gene Name: [IL12B](#)

Gene Alias: CLMF;CLMF2; IL-12B;NKSF;NKSF2

Gene Type: protein coding

mRNA Refseq: [NM_002187.2](#)

Protein Refseq: [NP_002178.2](#)

MIM: [161561](#)

GeneID: [3593](#)

Chromosome Location: 5q31.1-q33.1

Pathway: Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Toll-like receptor signaling pathway; Type I diabetes mellitus.

Function: Contributes to cytokine activity; interleukin-12 beta subunit binding; interleukin-12 receptor binding; interleukin-27 binding; protein binding; protein heterodimerization activity.

REFERENCES

1. Kaliński P, et al. IL-12-deficient dendritic cells, generated in the presence of prostaglandin E2, promote type 2 cytokine production in maturing human naive T helper cells. *J. Immunol.* 1997.159 (1): 28–35.