

Active GMP Recombinant Human IL12 Protein

Cat. No. IL12-158HG **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human IL12 (Arg23-Ser219&Ile23-Ser328) was produced in HEK293 cell in an animal component free process under cGMP guidelines.
Species	Human
Source	HEK293
ProteinLength	23-219;23-328 a.a.
Description	IL-12 is a heterodimeric pleiotropic cytokine made up of a 40 kDa (p40) subunit and a 35 kDa (p35) subunit. Human and mouse IL-12 share 70% and 60% amino acid sequence identity in their p40 and p35 subunits, respectively. IL-12 is involved in the differentiation of naive T cells into Th1 cells. It is known as a T cell-stimulating factor, which can stimulate the growth and function of T cells. It stimulates the production of interferon-gamma (IFN-γ) and tumor necrosis factor-alpha (TNF-α) from T cells and natural killer (NK) cells, and reduces IL-4 mediated suppression of IFN-γ. T cells that produce IL-12 have a coreceptor, CD30, which is associated with IL-12 activity. IL-12 plays an important role in the activities of natural killer cells and T lymphocytes. IL-12 mediates enhancement of the cytotoxic activity of NK cells and CD8⁺ cytotoxic T lymphocytes.
Form	Lyophilized.
Bio-activity	Measured in a cell proliferation assay using antibody against CD3-activated human

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	peripheral blood lymphocytes (PBL). The ED50 for this effect is typically 0.5 ng/ml.
AA Sequence	RNLPVATPDPGMFPCLHHSQNLLRAVSNNMLQKARQTLEFYPCTSEEIDHEDITKDKT STVEACLP LELTKNESCLNSRETSFITNGSCLASRKTSFMMALCLSSIEDLKMYQV EFKTMNAKLLMDPKRQ IFLDQNMMLAVIDELMQALNFNSETVPQKSSLEEPDFYKTKI KLCILLHAFRIRAVTIDRVMSYLN AS&IWELKKDVYVVELDWYPDAPGEMVVLTCDT PEEDGITWTLDQSSEVLGSGKTLTIQVKEFGD AGQYTCHKGGEVLSHSLLLHKKKE DGIWSTDILKDQKEPKNKTFLRCEAKNYSGRFTCWWLTTIS TDLTFSVKSSRGSSD PQGVTCGAATLSAERVGRDNKEYEYSVEQCEDSACPAAEESLPIEVMVDA VHKLK YENYTSSFFIRDIIKPDPPKNLQLKPLKNSRQVEVSWEYPDTWSTPHSYFSLTFCVQ VQG KSKREKKDRVFTDKTSATVICRKNASISVRAQDRYSSSWSEWASVPCS
Residual Host Cell DNA Content	<10pg/mg
Residual Host Cell Protein Content	<1ug/mg
Endotoxin	<0.1EU/ug
Purity	Greater than 95% as determined by reducing SDS-PAGE.
Usage	Recommemnd working concentration: 0.5ng/ml
Storage	Lyophilized and reconstituted protein should be stored at -80 centigrade. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration >100µg/ml. Dissolve the lyophilized protein in ddH2O.

Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

Quality Statement

Our GMP proteins are produced according to relevant sections of the following documents: WHO TRS, No. 822, 1992 Annex 1, Good Manufacturing Practices for Biological Products; USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and USP Chapter 92, Growth Factors and Cytokines Used in Cell Therapy Manufacturing.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

GENE INFORMATION

Gene Name

IL12A interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35) [Homo sapiens]
IL12B interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40) [Homo sapiens]

Synonyms

IL-12A; NFSK; P35; IL-12 subunit p35; IL-12, subunit p35; IL12A; IL12B; NKSF2; interleukin-12 subunit beta; CLMF; CLMF2; p40; IL 12B; IL12; subunit p40; interleukin 12; NKSF; CLMF p40; IL-12 subunit p40; IL12, subunit p40; interleukin 12, p40; interleukin

Gene ID

3592;
3593

mRNA Refseq

NM_000882;
NM_002187

Protein Refseq

NP_000873;
NP_002178

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MIM	161560; 161561
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UniProt ID	P29459; P29460
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