

# Recombinant human IL-12 p70 protein

Catalog Number: ATGP2843

## PRODUCT INFORMATION

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### Expression system

Baculovirus

### Domain

23-328aa(p40)/23-219aa(p35)

### UniProt No.

P29460(p40)/P29459(p35)

### NCBI Accession No.

NP\_002178(p40)AAK84425(p35)

### Alternative Names

IL12A, IL12B, CLMF p35, CLMF p40, Cytotoxic lymphocyte maturation factor 35 kDa subunit, Cytotoxic lymphocyte maturation factor 40 kDa subunit, Interleukin 12 alpha chain, Interleukin-12 beta chain, NK cell stimulatory factor chain 1, p35, NK cell stimulatory factor chain 2, p40, NKSF1, NKSF2

## PRODUCT SPECIFICATION

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### Molecular Weight

34.6 kDa (p40, 306aa)

23.3 kDa (p35, 203aa)

The heterodimeric IL12 has a predicted Molecular weight of 57.9 kDa (509aa). Molecular weight on SDS-PAGE will appear higher.

### Concentration

0.5mg/ml (determined by absorbance at 280nm)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

### Purity

> 90% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

The activity is determined by the IFN-g ELISA in a using NK-92 human natural killer cells. The ED50 range  $\leq$ 1ng/ml.

### Tag

His-Tag

### Application

SDS-PAGE, Bioactivity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid

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repeated freezing and thawing cycles.

## BACKGROUND

### Description

IL12 is a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. It is a disulfide-linked heterodimer composed of the 40 kD cytokine receptor like subunit and a 35 kD subunit. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. IL12 has been found to be important for sustaining a sufficient number of memory/effector Th1 cells to mediate long-term protection to an intracellular pathogen. Recombinant human IL12 protein, fused to His-tag at C-terminus, was expressed in insect cells using baculovirus expression system and purified by using conventional chromatography techniques.

### Amino acid Sequence

IL12B(p40)

IWELKKDVVY VELDWYPDAP GEMVVLTCDT PEEDGITWTL DQSSEVLGSG KTLTIQVKEF GDAGQYTCHK GGEVLSHSL  
LLHKKEDGIW STDILKDQKE PKNKTFLRCE AKNYSGRFTC WWLTTISTDL TFSVKSSRGS SDPQGVTCTGA ATLSAERVRG  
DNKEYEYSVE CQEDSACPAE EESLPIEVMV DAVHKLKYEN YTSSFFIRDI IKPDPPKNLQ LKPLKNSRQV EVSWEYPDTW  
STPHSYFSLT FCVQVQGKSK REKKDRVFTD KTSATVICRK NASISVRAQD RYSSSSWSEW ASVPCS

IL12A(p35)

RNLPVATPDP GMFPC LHHSQ NLLRAVS NML QKARQTLEFY PCTSEEIDHE DITKDKTSTV EACLPLELTK NESCLNSRET  
SFITNGSCLA SRKTSFMMAL CLSSIEDLK MYQVEFKTMN AKLLMDPKRQ IFLDQNMLAV IDELMQALNF NSETVPQKSS  
LEEPDFYKTK IKLCILLHAF RIRAVTIDRV MSYLNAS<HHH HHH>

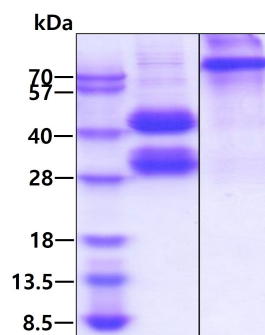
### General References

Barton J.L., et al. (2000) Eur. J. Immunol. 30:3299-3308

Bazan J.F., et al. (2001) J. Immunol. 167:1440-1446

## DATA

### SDS-PAGE



3 $\mu$ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain

### Biological Activity

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Human IL12 stimulates IFN-g secretion of the NK-92 human natural killer cells. The ED50 range  $\leq 1$  ng/ml.

