

# Recombinant mouse IL-12 p70 protein

Catalog Number: ATGP3739

## PRODUCT INFORMATION

---

### Expression system

Baculovirus

### Domain

23-335aa(p40)/23-215aa(p35)

### UniProt No.

P43432(p40)/P43431(p35)

### NCBI Accession No.

NP\_001290173(p40)/NP\_032377(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

---

### Molecular Weight

35.7 kDa (p40, 313aa)

22.5 kDa (p35, 199aa)

The heterodimeric IL12 has a predicted Molecular weight of 58.3 kDa (512aa).

Molecular weight on SDS-PAGE will appear higher

### Concentration

0.5mg/ml (determined by Bradford assay)

### Formulation

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

### Purity

> 95% 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 for this effect is less or equal to 10ng/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

# Recombinant mouse IL-12 p70 protein

Catalog Number: ATGP3739

repeated freezing and thawing cycles.

## BACKGROUND

### Description

IL12b/IL12a, also known as interleukin 12 (subunit beta/alpha), is a cytokine that can act as a growth factor for activated T and NK cells, enhance the lytic activity of NK/lymphokine-activated killer cells, and stimulate the production of IFN-gamma by resting PBMC. It is a key mediator of cellular-immunity and induces the differentiation of Th1 cells from precursor T helper cells. As it is associated with IL23A to form the IL-23 interleukin, it induces autoimmune inflammation and is responsible for autoimmune inflammatory diseases and may be important for tumorigenesis. Recombinant mouse IL12b/IL12a protein, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

### Amino acid Sequence

IL12B(p40)

MWELEKDVYV VEVDWTPDAP GETVNLTCDT PEEDDITWTS DQRHGVIGSG KTLTITVKEF LDAGQYTCHK GGETLSHSHL  
 LLHKKENGIW STEILKNFKN KTFLKCEAPN YSGRFTCSWL VQRNMDLKFN IKSSSSSPDS RAVTCGMASL SAEKVTLTDQR  
 DYEKYSVSCQ EDVTCPTAEE TLPIELALEA RQQNKYENYS TSFFIRDIK PDPPKNLQMK PLKNSQVEVS WEYPDSWSTP  
 HSYFSLKFFV RIQRKKEKMK ETEEGCNQKG AFLVEKTSTE VQCKGGNVCV QAQDRYYNSS CSKWACVPCR VRS

IL12A(p35)

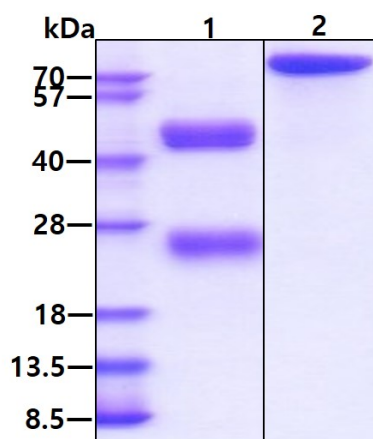
RVIPVSGPAR CLSQSRNLLK TTDDMVKTAR EKLKHYSCTA EDIDHEDITR DQTSTLKTCL PLELHKNESE LATRETSSTT  
 RGSLPPQKT SLMMTLCLGS IYEDLKMYQT EFQAINAALQ NHHHQIILD KGMLVAIDEL MQSLNHNGET LRQKPPVGEA  
 DPYRVKMKLC ILLHAFSTRV VTINRVMGYL SSA<HHHHHH>

### General References

Zhang X., et al, (2015) J Immunol. 195:1665-1675.  
 Zamani A., et al, (2017) Immune Netw. 17:186-191.

## DATA

### SDS-PAGE

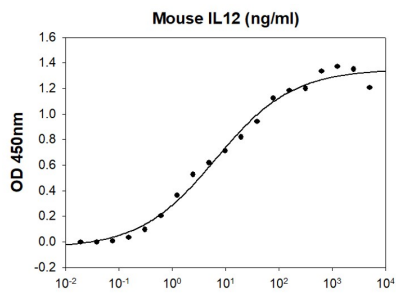


3ug by SDS-PAGE visualized by coomassie blue stain.  
 Lane 1: reducing condition  
 Lane 2: non-reducing condition

### Biological Activity

## Recombinant mouse IL-12 p70 protein

Catalog Number: ATGP3739



Mouse IL12 stimulates IFN-g secretion of the NK-92 human natural killer cells. The ED50 range is less or equal to 10 ng/ml.