# Human IL-35 (IL12A & EBI3 Heterodimer) Protein

**Catalog Number:** CT040-H0323H

## General Information

**Gene Name Synonym:**

CLMF; IL-12A; NFSK; NKSF1; P35

**Protein Construction:**

A DNA sequence encoding the p35 subunit of human IL12, termed as IL12A (NP_000873.2) (Met1-Ser219) was fused with the C-terminal His-tagged Fc region of human IgG1 at the C-terminus, constructed the plasmid 1; A DNA sequence encoding the human IL27B, (NP_005746.2) (Met1-Lys229) was fused with the C-terminal flag-tagged Fc region of human IgG1 at the C-terminus, constructed the plasmid 2. The two plasmids were co-expressed and the heterodimer was purified.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** (59.8+33.3) % as determined by SDS-PAGE

**Endotoxin:**

< 1.0 EU per μg of the protein as determined by the LAL method

**Stability:**

Samples are stable for up to twelve months from date of receipt at -70 ℃

**Predicted N terminal:** Arg 23 & Arg 21

**Molecular Mass:**

The recombinant human IL12A&IL27B comprises 905 (447+458) amino acids and has a calculated molecular mass of 102 (50.7+ 51.3) KDa. The apparent molecular mass of the recombinant human IL12A&IL27B is approximately 60 & 63 KDa respectively in SDS-PAGE under reducing conditions.

**Formulation:**

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

**Storage:**

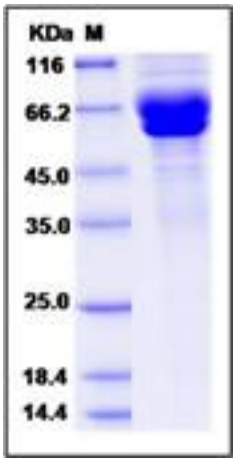
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

**Reconstitution:**

Detailed reconstitution instructions are sent along with the products.

**SDS-PAGE:**




## Protein Description

IL12A is a subunit of a cytokine that acts on T and natural killer cells, and has a broad array of biological activities. IL12A, together with IL27B, form a disulfide-linked heterodimer: IL12A&IL27B. IL12A&IL27B is required for the T-cell-independent induction of IFN-gamma, and is important for the differentiation of both Th1 and Th2 cells. The responses of lymphocytes to this cytokine are mediated by the activator of transcription protein STAT4. Nitric oxide synthase 2A (NOS2A/NOS2) is found to be required for the signaling process of IL12A&IL27B in innate immunity.

**References**

1.Wolf S.F., *et al.*,(1991), Cloning of cDNA for natural killer cell stimulatory factor, a heterodimeric cytokine with multiple biologic effects on T and natural killer cells. J. Immunol. 146:3074-3081. 2.Gubler U., *et al.*, (1991), Coexpression of two distinct genes is required to generate secreted bioactive cytotoxic lymphocyte maturation factor.Proc. Natl. Acad. Sci. U.S.A. 88:4143-4147. 3.Batten M., *et al.*,(2007), The biology and therapeutic potential of interleukin 27.J. Mol. Med. 85:661-672.