

**Synonym**

IL12B,CLMF,CLMF2,NKSF,NKSF2,p40

**Source**

Human IL-12B, His Tag(NK2-H52H7) is expressed from human 293 cells (HEK293). It contains AA Ile 23 - Ser 328 (Accession # [P29460-1](#)).

Predicted N-terminus: Ile 23

**Molecular Characterization**

IL-12B(Ile 23 - Ser 328)  
P29460-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 36.6 kDa. The protein migrates as 44 kDa and 46 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

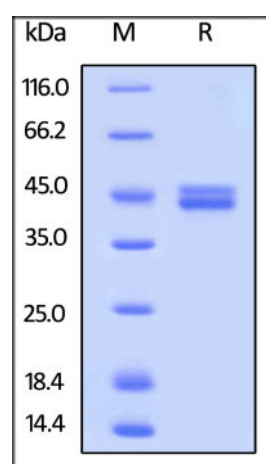
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

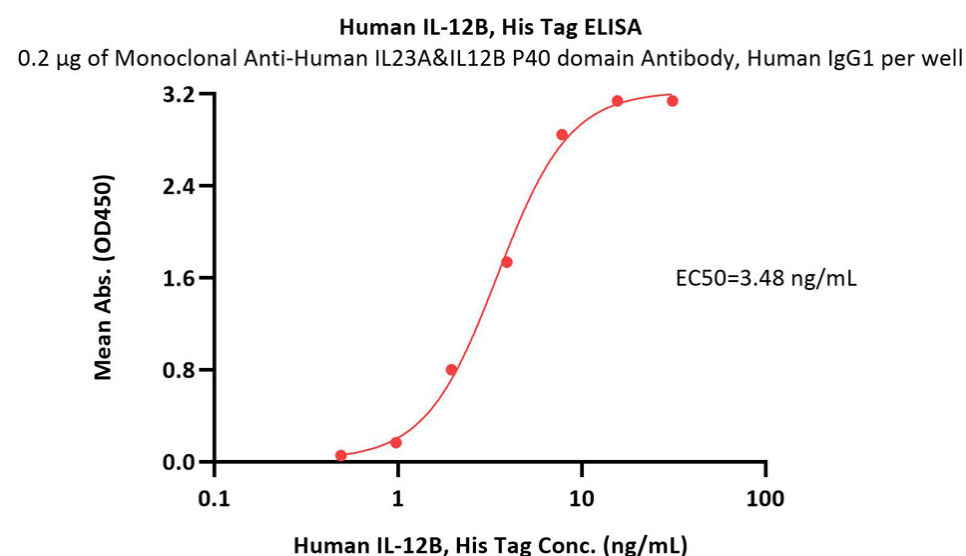
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

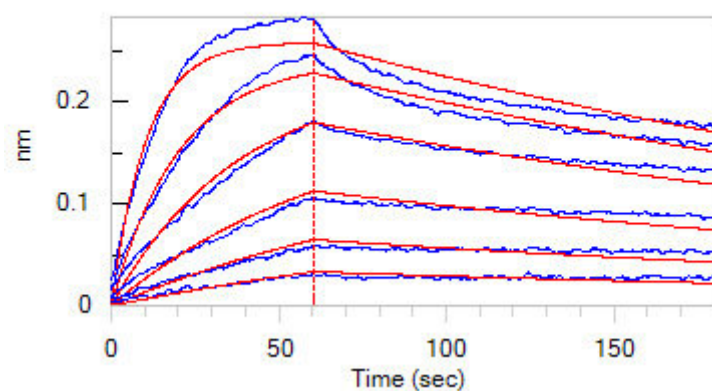
Human IL-12B, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-ELISA**

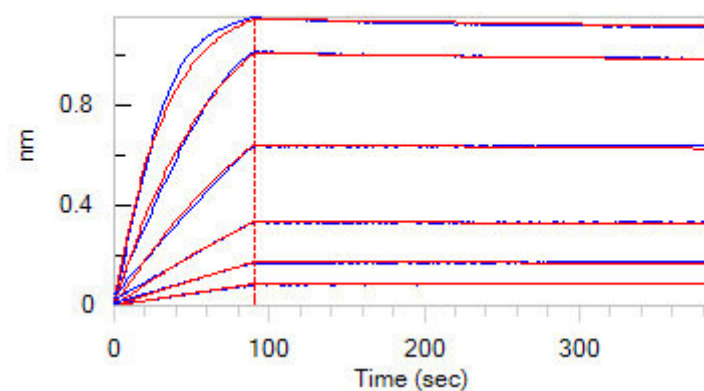


Immobilized Monoclonal Anti-Human IL23A&IL12B P40 domain Antibody, Human IgG1 at 2 µg/mL (100 µL/well) can bind Human IL-12B, His Tag (Cat. No. NK2-H52H7) with a linear range of 1-8 ng/mL (QC tested).

### Bioactivity-BLI



Loaded Human IL-12 R beta 1, Fc Tag (Cat. No. ILB-H5255) on Protein A Biosensor, can bind Human IL-12B, His Tag (Cat. No. NK2-H52H7) with an affinity constant of 3.78 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Anti-IL23A & IL12B MAb (P40 domain) on Protein A Biosensor, can bind Human IL-12B, His Tag (Cat. No. NK2-H52H7) with an affinity constant of 0.279 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

### Background

Interleukin-12 (IL12) is also known as natural killer cell stimulatory factor (NKSF), cytotoxic lymphocyte maturation factor (CLMF), is a heterodimeric cytokine encoded by two separate genes, IL-12A (p35) and IL-12B (p40). IL12 is naturally produced by dendritic cells, macrophages and human B-lymphoblastoid cells (NC-37) in response to antigenic stimulation. IL-12 is involved in the differentiation of naive T cells into Th0 cells and plays an important role in the activities of natural killer cells and T lymphocytes. IL-12 also has anti-angiogenic activity, which means it can block the formation of new blood vessels.

Interleukin-12 subunit beta (IL12B) also known as NKSF2, CLMF2 and P40. Interleukin-12 subunit beta has been shown to interact with IL23. A large excess of monomeric IL12B is also secreted by the cells producing IL12, and exhibits no demonstrable biological activity. Overexpression of IL12B gene has been shown to be associated with the pathogenesis of multiple sclerosis. In addition, studies have revealed that the promoter polymorphism of this gene is implicated in the severity of atopic and non-atopic asthma in children.

### Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.