

**Synonym**

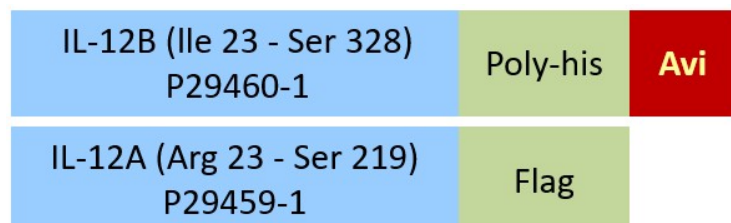
IL12,p70,Interleukin-12

**Source**

Biotinylated Human IL-12B&IL-12A Heterodimer, His,Avitag&Flag Tag(IL2-H8210) is expressed from human 293 cells (HEK293). It contains AA Ile 23 - Ser 328 (IL-12B) & Arg 23 - Ser 219 (IL-12A) (Accession # [P29460-1](#) (IL12B) & [P29459-1](#) (IL12A)).

Predicted N-terminus: Ile 23 (IL12B) & Arg 23 (IL12A)

**Molecular Characterization**



Biotinylated Human IL-12B&IL-12A Heterodimer Protein, His,Avitag&Flag Tag is produced by co-expression of IL-12B and IL-12A, has a calculated MW of 38.3 kDa (IL-12B) and 23.8 kDa (IL-12A). Subunit IL-12B is fused with a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™) and subunit IL-12A is fused with flag tag at the C-terminus. The reducing (R) heterodimer protein migrates as 40-50 kDa (IL12B) and 32-35 kDa (IL12A) respectively due to glycosylation.

**Labeling**

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

**Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>90% 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**

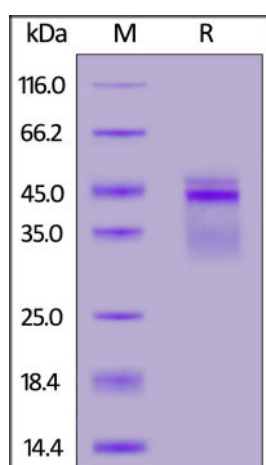
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

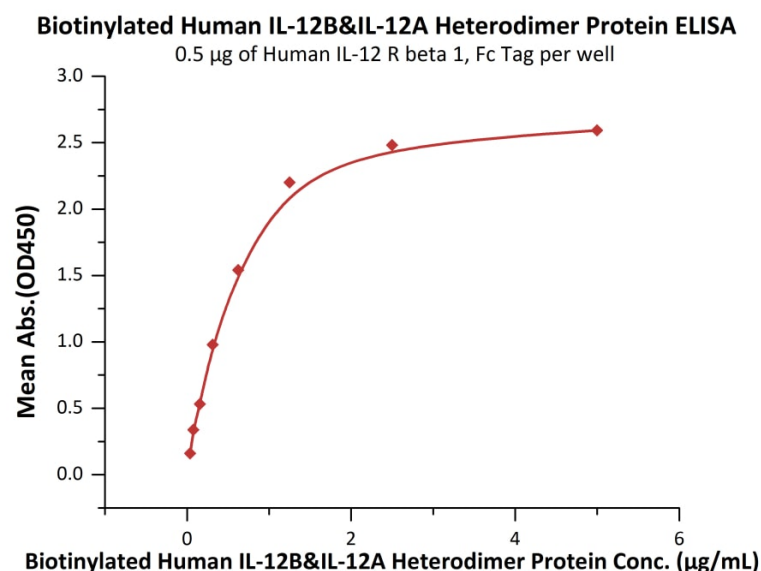
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

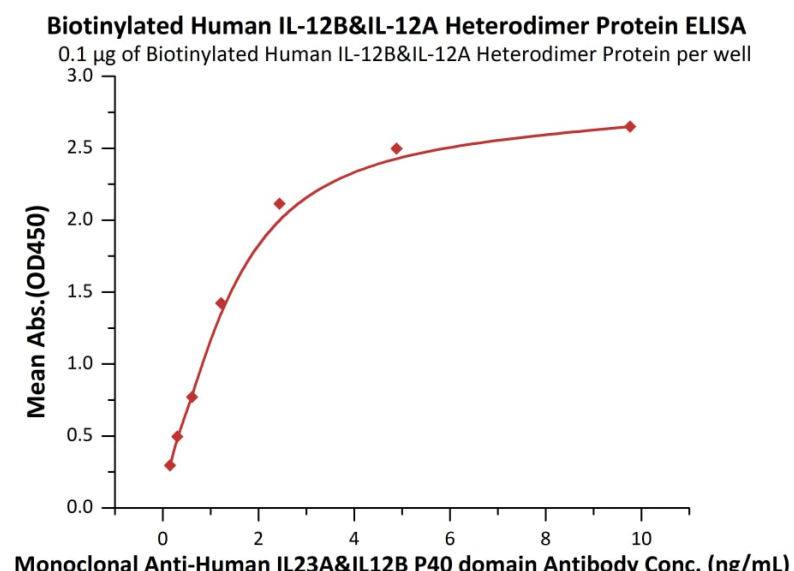


Biotinylated Human IL-12B&IL-12A Heterodimer, His,Avitag&Flag Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

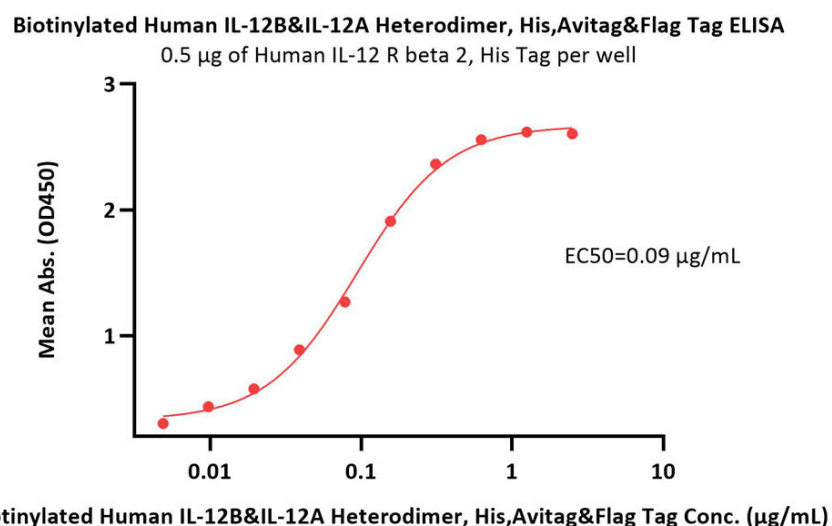
**Bioactivity-ELISA**



Immobilized Human IL-12 R beta 1, Fc Tag (Cat. No. ILB-H5255) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-12B&IL-12A Heterodimer Protein, His,Avitag&Flag Tag (Cat. No. IL2-H8210) with a linear range of 0.039-0.625 µg/mL (QC tested).



Immobilized Biotinylated Human IL-12B&IL-12A Heterodimer Protein, His,Avitag&Flag Tag (Cat. No. IL2-H8210) at 1 µg/mL (100 µL/well) on streptavidin precoated (0.5 µg/well) plate. can bind Monoclonal Anti-Human IL23A&IL12B P40 domain Antibody, Human IgG1 with a linear range of 0.2-1 ng/mL (Routinely tested).



Immobilized Human IL-12 R beta 2, His Tag (Cat. No. ILB-H52H6) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-12B&IL-12A Heterodimer, His,Avitag&Flag Tag (Cat. No. IL2-H8210) with a linear range of 0.003-0.3 µg/mL (Routinely tested).

**Background**

Interleukin 12 (IL12) is also known as p70, and is an interleukin that is naturally produced by dendritic cells, macrophages and human B-lymphoblastoid cells (NC-37) in response to antigenic stimulation. IL12 is a heterodimeric cytokine, containing IL-12A (p35) and IL-12B (p40). 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 IFN-γ and TNF-α from T cells and NK cells, and reduces IL-4 mediated suppression of IFN-γ. IL-12 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.

**Clinical and Translational Updates**

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