Synonym

IL-23 alpha & IL-12 beta

Source

Human IL-23A&Rat IL-12B Heterodimer Protein, His Tag&Tag Free(ILB-HR52W3) is expressed from human 293 cells (HEK293). It contains AA Arg 20 - Pro 189 (IL23A) & Met 23 - Ser 335 (IL12B) (Accession # Q9NPF7-1 (IL23A) & Q9R278-1 (IL12B)).
Predicted N-terminus: Arg 20 (IL23A) & Met 23 (IL12B)

Molecular Characterization

Human IL-23A & Rat IL-12B Heterodimer Protein, His Tag&Tag Free, produced by co-expression of IL-23A and IL-12B, has a calculated MW of 20.6 kDa (IL-23A) and 35.9 kDa (IL-12B). Subunit IL-23A is fused with a polyhistidine tag at the N-terminus and subunit IL-12B contains no tag. The reducing (R) protein migrates as 23 kDa (IL-23A) and 45 kDa and 47 kDa (IL-12B) respectively due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

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

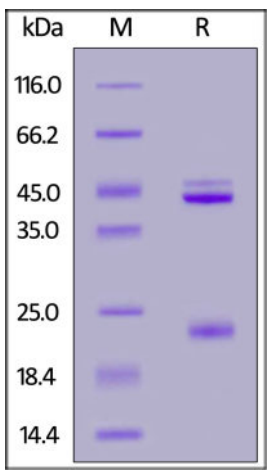
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

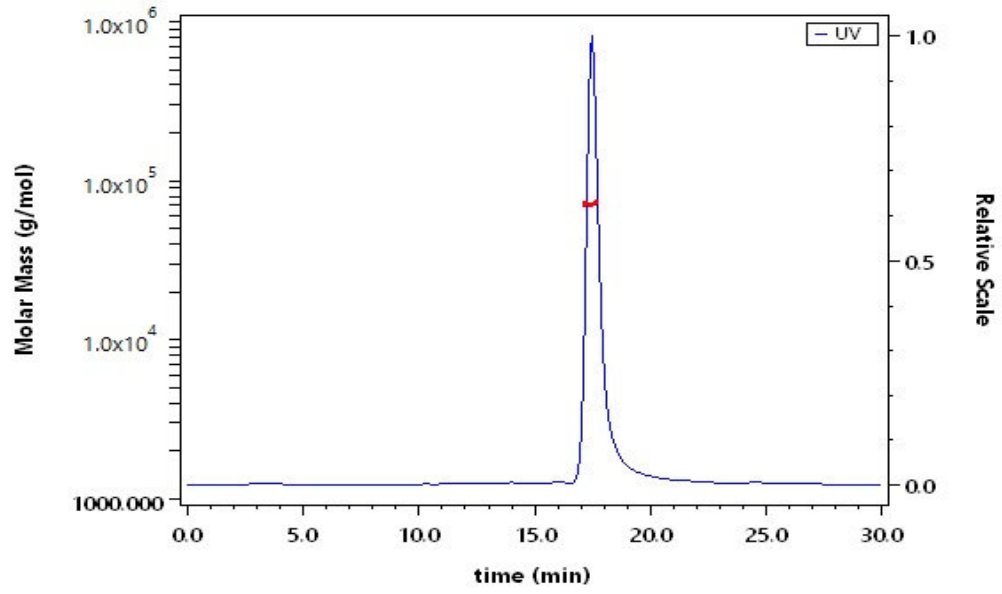
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human IL-23A&Rat IL-12B Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

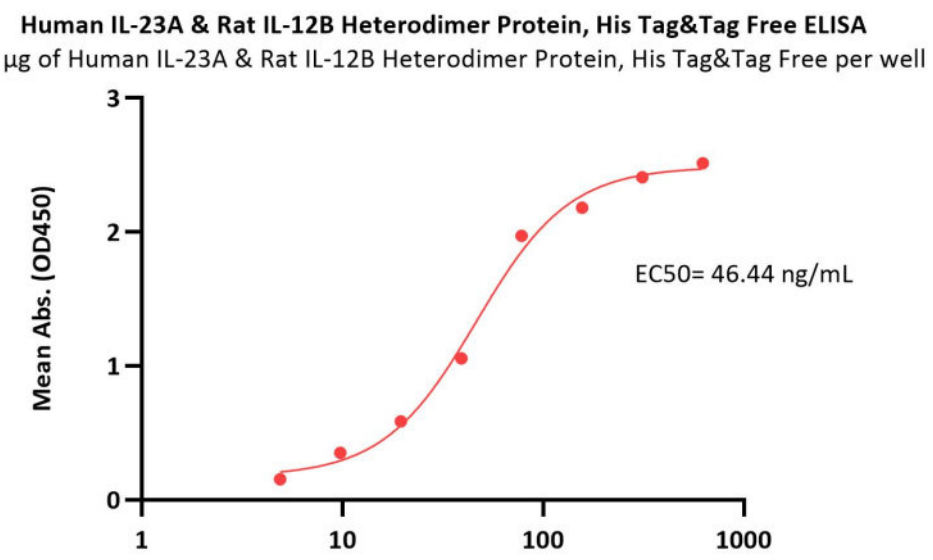
SEC-MALS



The purity of Human IL-23A&Rat IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HR52W3) is more than 90% and the molecular weight of this protein is around 65-75 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

Immobilized Human IL-23 R, Fc Tag (Cat. No. ILR-H5254) at 5 μg/mL (100 μL/well) can bind Human IL-23A & Rat IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HR52W3) with a linear range of 0.039-0.156 μg/mL (QC tested).



Immobilized Human IL-23A & Rat IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HR52W3) at 5 μg/mL (100 μL/well) can bind Human IL-12 R beta 1, Fc Tag (Cat. No. ILB-H5255) with a linear range of 5-78 ng/mL (Routinely tested).

Background

Interleukin-23 subunit alpha (IL-23 alpha) can associates with IL12B to form the IL-23 interleukin, a heterodimeric cytokine which functions in innate and adaptive immunity. IL-23 may constitute with IL-17 an acute response to infection in peripheral tissues. IL-23 binds to a heterodimeric receptor complex composed of IL12RB1 and IL23R, activates the Jak-Stat signaling cascade, stimulates memory rather than naive T-cells and promotes production of proinflammatory cytokines. IL-23 induces autoimmune inflammation and thus may be responsible for autoimmune inflammatory diseases and may be important for tumorigenesis.