



Synonym

IL-23 alpha & IL-12 beta

Source

Human IL-23 alpha&Mouse IL-12 beta Heterodimer Protein, His Tag&Tag Free(ILB-HM52W6) is expressed from human 293 cells (HEK293). It contains AA Arg 20 - Pro 189 (IL23A) & Met 23 - Ser 335 (IL12B) (Accession # [Q9NPF7-1](#) (IL23A) & [P43432-1](#) (IL12B)).

Predicted N-terminus: His (IL23A) & Met 23 (IL12B)

Molecular Characterization

Poly-his	IL23A (Arg 20 - Pro 189) Q9NPF7-1
	IL12B (Met 23 - Ser 335) P43432-1

Human IL-23A & Mouse IL-12B Heterodimer Protein, His Tag&Tag Free, produced by co-expression of IL-23 alpha and IL-12 beta, has a calculated MW of 19.5 kDa (IL-23 alpha) and 35.8 kDa (IL-12 beta). Subunit IL-23 alpha is fused with a polyhistidine tag at the N-terminus and subunit IL-12 beta contains no tag. The protein migrates as 20 kDa (IL23A) & 45 kDa (IL12B) when calibrated against [Star Ribbon Pre-stained Protein Marker](#) 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

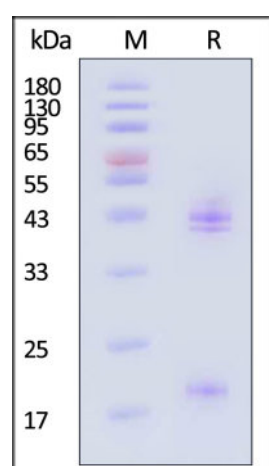
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

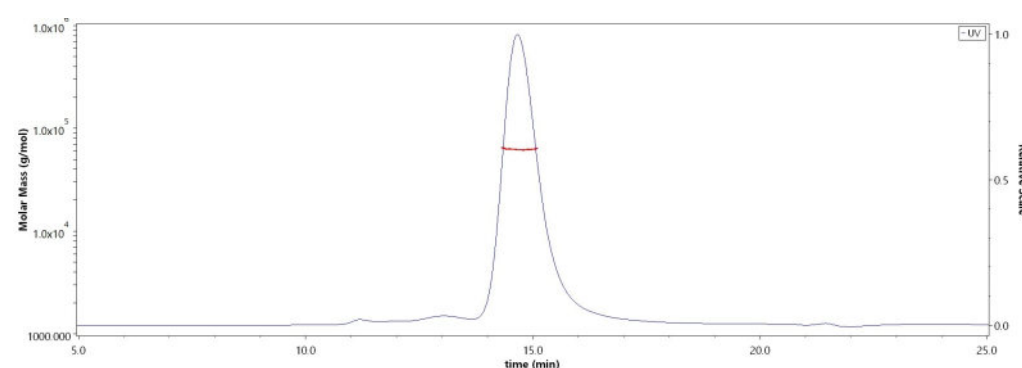
SDS-PAGE



Human IL-23 alpha&Mouse IL-12 beta 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 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

SEC-MALS



The purity of Human IL-23 alpha&Mouse IL-12 beta Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HM52W6) is more than 85% and the molecular weight of this protein is around 55-70 kDa verified by SEC-MALS.

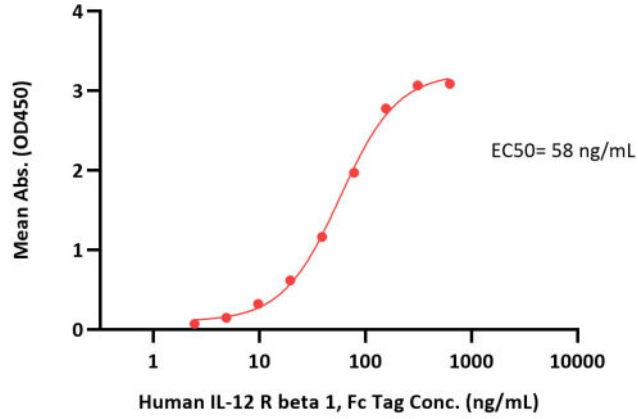
[Report](#)

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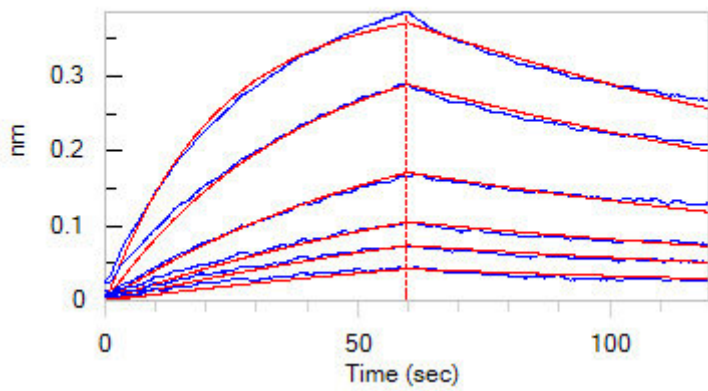


Human IL-23 alpha&Mouse IL-12 beta Heterodimer Protein, His Tag&Tag Free ELISA
0.2 µg of Human IL-23 alpha&Mouse IL-12 beta Heterodimer Protein, His Tag&Tag Free per well

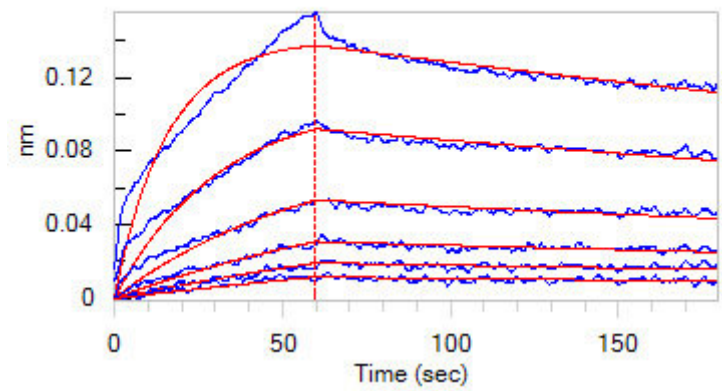


Immobilized Human IL-23 alpha&Mouse IL-12 beta Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HM52W6) at 2 µg/mL (100 µL/well) can bind Human IL-12 R beta 1, Fc Tag (Cat. No. ILB-H5255) with a linear range of 5-78 ng/mL (QC tested).

Bioactivity-BLI



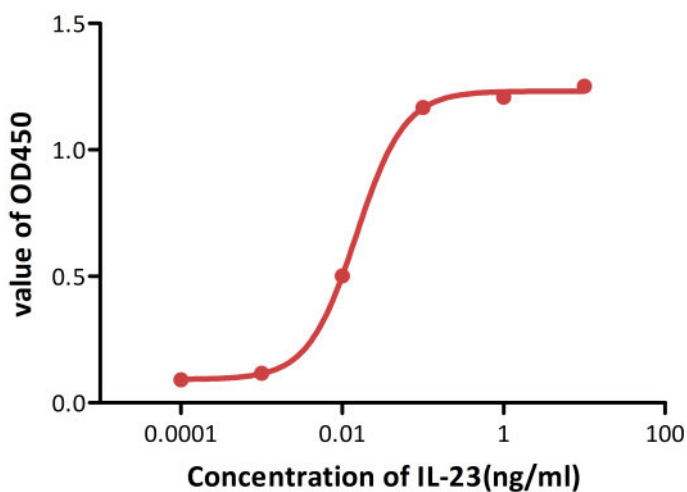
Loaded Human IL-23 R, Fc Tag (Cat. No. ILR-H5254) on Protein A Biosensor, can bind Human IL-23 alpha&Mouse IL-12 beta Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HM52W6) with an affinity constant of 15.7 nM as determined in BLI assay (ForteBio Octet Red96e) (QC tested).



Loaded Human IL-12 R beta 1, Fc Tag (Cat. No. ILB-H5255) on Protein A Biosensor, can bind Human IL-23A & Mouse IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HM52W6) with an affinity constant of 2.79 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

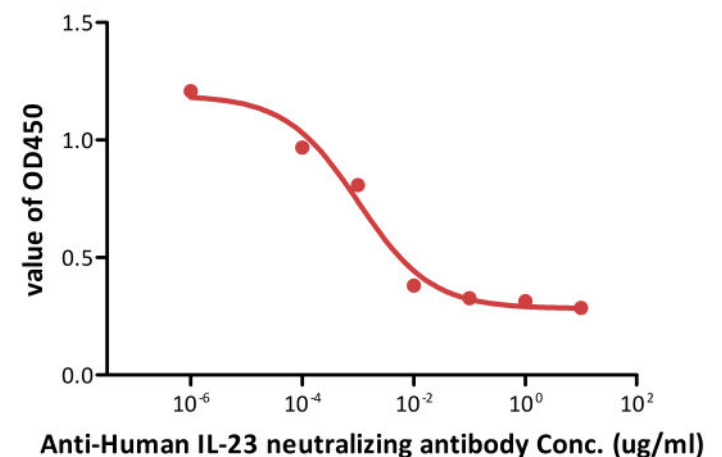
Bioactivity-Bioactivity CELL BASE

IL-23 stimulates production of IL-17 in spleen cells



Human IL-23A & Mouse IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-HM52W6) stimulates secretion of IL-17 by

Inhibitory experiment by cell based assay of Human IL-23A & Mouse IL-12B Heterodimer Protein



Cell based assay shows that the secretion of IL-17 induced by Human IL-23A & Mouse IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-

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Mouse spleen cells. The ED50 for this effect is 0.0069-0.0426 ng/mL (Routinely tested).

HM52W6) is inhibited by increasing concentration of the Anti-Human IL-23 neutralizing antibody. The IC50 is between 0.41-1.012 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.

Clinical and Translational Updates

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