



Synonym

IL-23 alpha & IL-12 beta

Source

Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free(ILB-H52W5) is expressed from human 293 cells (HEK293). It contains AA Arg 20 - Pro 189 (IL23A) & Ile 23 - Ser 328 (IL12B) (Accession # [Q9NPF7-1](#) (IL23A) & [P29460-1](#) (IL12B)).
Predicted N-terminus: His (IL23A) & Ile 23 (IL12B)

Molecular Characterization

Poly-his	IL23A (Arg 20 - Pro 189) Q9NPF7-1
	IL12B (Ile 23 - Ser 328) P29460-1

Human IL-23A&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 34.7 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 reducing (R) protein migrates as 23 kDa (IL-23 alpha) & 40-45 kDa (IL-12 beta) 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 / rFC 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

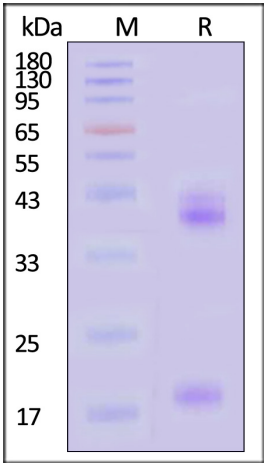
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

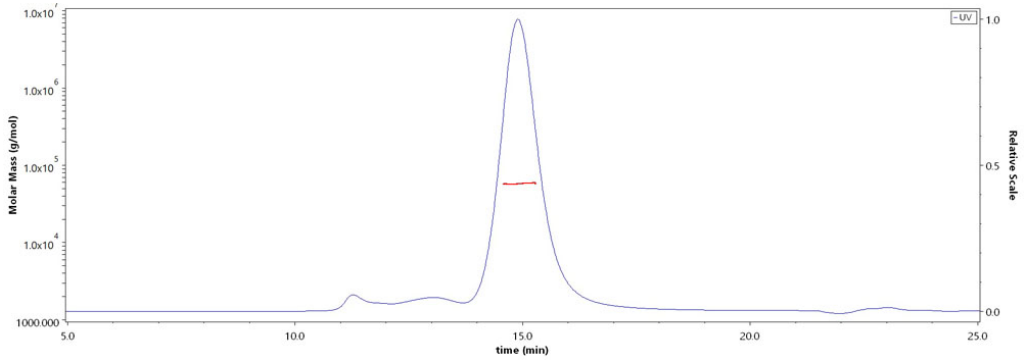
SDS-PAGE



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

Bioactivity-ELISA

SEC-MALS

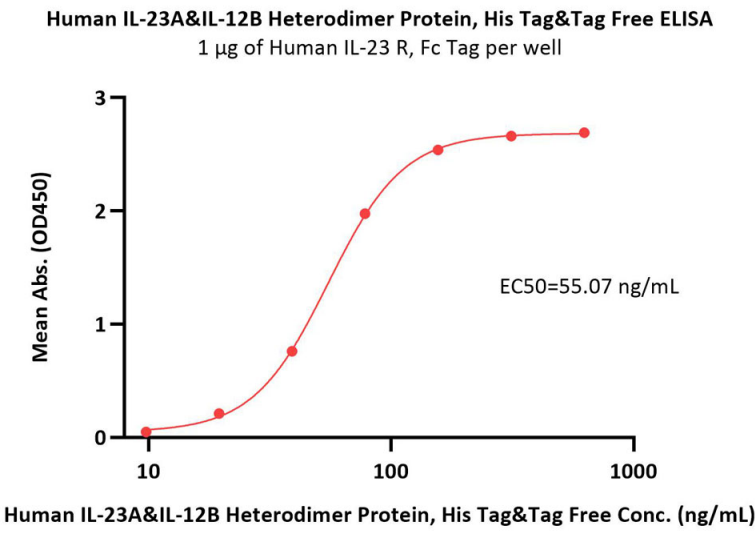
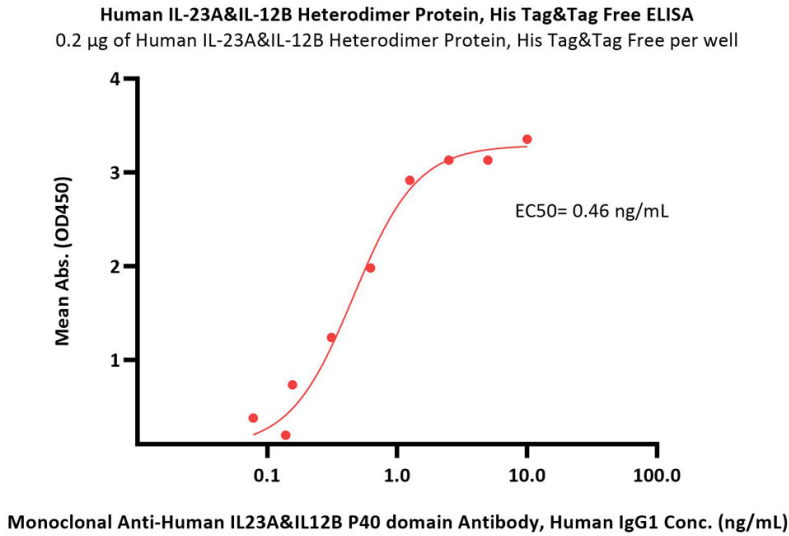


The purity of Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) is more than 85% and the molecular weight of this protein is around 50-75 kDa verified by SEC-MALS. [Report](#)



Human IL-23 alpha&IL-12 beta Heterodimer Protein, His Tag&Tag Free (MALS verified)

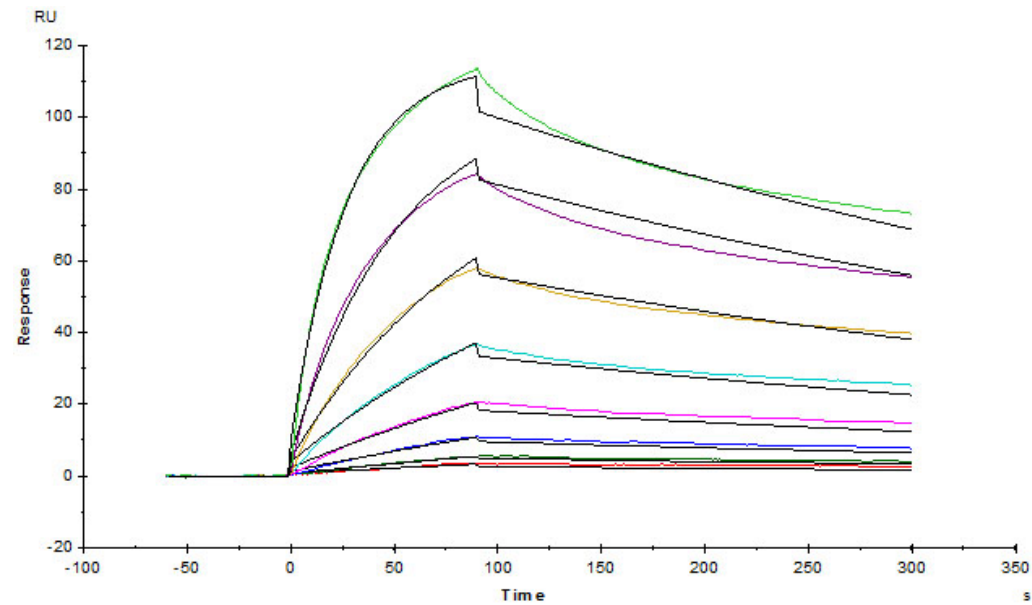
Catalog # ILB-H52W5



Immobilized Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) at 2 µg/mL (100 µL/well) can bind Monoclonal Anti-Human IL23A&IL12B P40 domain Antibody, Human IgG1 with a linear range of 0.1-1.25 ng/mL (QC tested).

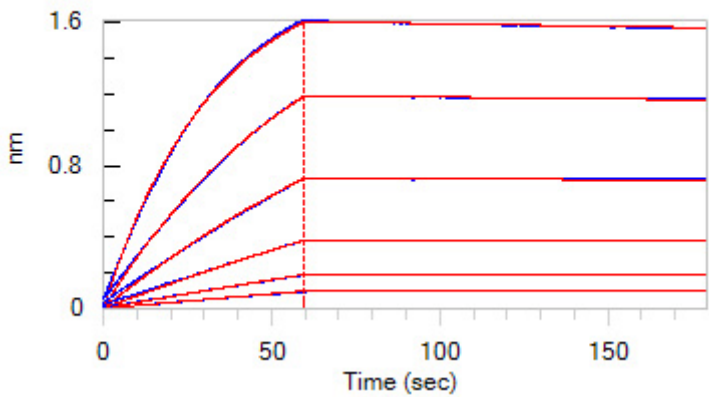
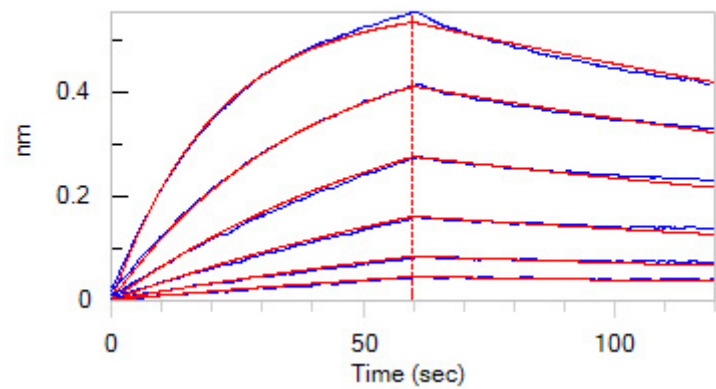
Immobilized Human IL-23 R, Fc Tag (Cat. No. ILR-H5254) at 10 µg/mL (100 µL/well) can bind Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) with a linear range of 20-78 ng/mL (Routinely tested).

Bioactivity-SPR



Captured Human IL-23 R, Fc Tag (Cat. No. ILR-H5254) on CM5 chip via anti-human IgG Fc antibodies surface can bind Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) with an affinity constant of 5.36 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



Discounts, Gifts,
and more!

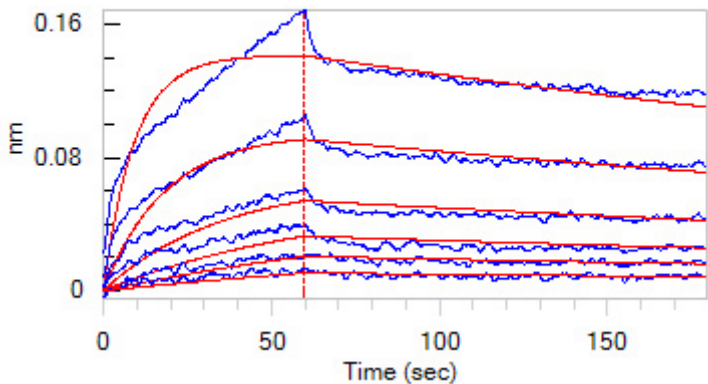


Human IL-23 alpha&IL-12 beta Heterodimer Protein, His Tag&Tag Free (MALS verified)

Catalog # ILB-H52W5



Loaded Human IL-23 R, Fc Tag (Cat. No. ILR-H5254) on Protein A Biosensor, can bind Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) with an affinity constant of 9.25 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

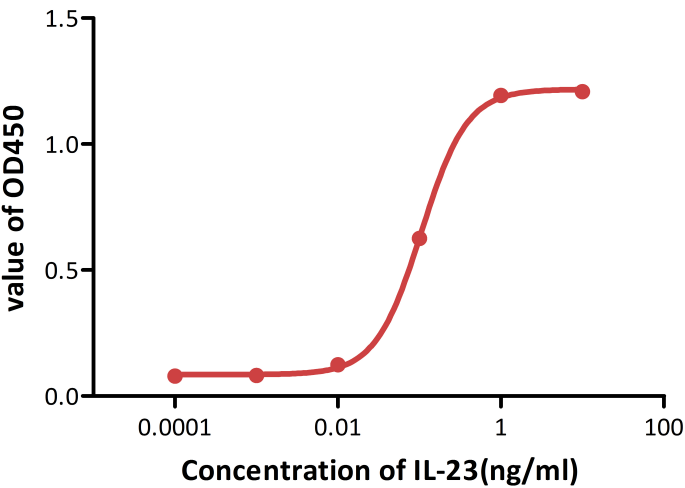


Loaded Anti-IL23A & IL12B MAb (P40 domain) on Protein A Biosensor, can bind Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) with an affinity constant of 0.588 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Loaded Human IL-12 R beta 1, Fc Tag (Cat. No. ILB-H5255) on Protein A Biosensor, can bind Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) with an affinity constant of 1.97 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

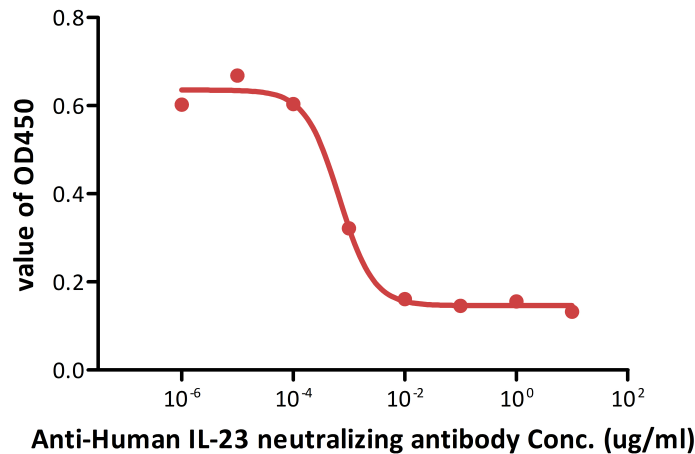
Bioactivity-CELL BASE

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



Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) stimulates secretion of IL-17 by mouse spleen cells. The ED50 for this effect is 0.1055-0.1635 ng/mL (Routinely tested).

Inhibitory experiment by cell based assay of Human IL-23 alpha & IL-12 beta Heterodimer Protein



Cell based assay shows that the secretion of IL-17 induced by Human IL-23A&IL-12B Heterodimer Protein, His Tag&Tag Free (Cat. No. ILB-H52W5) is inhibited by increasing concentration of the anti-human IL-23 neutralizing antibody. The IC50 is between 0.67-1.50 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.

Discounts, Gifts,
and more!

