Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (MALS verified)

Catalog # ILF-H52W6

Synonym

IL-17A,Interleukin-17A,CTLA-8,IL-17,IL-17F,Interleukin-17F,Cytokine ML-1,IL17A&IL17F

Source

Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (ILF-H52W6) is expressed from human 293 cells (HEK293). It contains AA Gly 24 - Ala 155 (IL-17A) & Arg 31 - Gln 163 (IL-17F) (Accession # Q16552-1 (IL-17A) & Q96PD4-1 (IL-17F)). Two sequential affinity purification steps were used to ensure exact 1:1 molar ratio of IL17A&IL17F heterodimer.
Predicted N-terminus: Trp (IL-17A) & His (IL-17F)

Molecular Characterization

Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag, produced by co-expression of IL-17A and IL-17F, has a calculated MW of 18.5 kDa (IL-17A) and 16.8 kDa (IL-17F). Subunit IL-17A is fused with a Twin Strep tag at the N-terminus and subunit IL-17F is fused with a polyhistidine tag at the N-terminus. The protein migrates as 19-27 kDa 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

>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

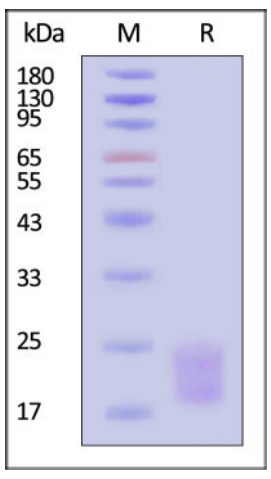
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

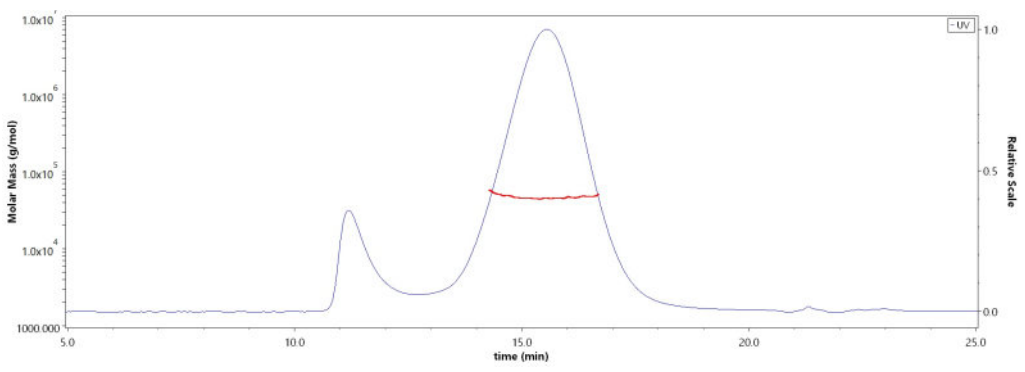
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



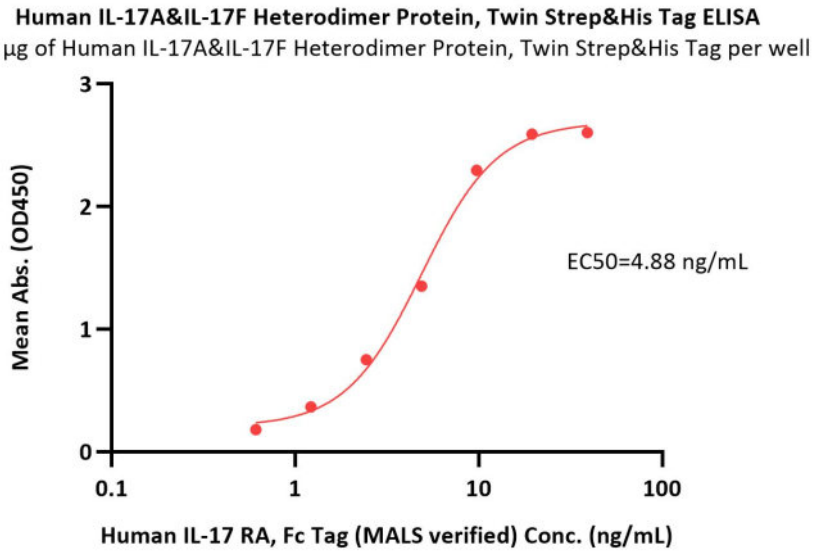
Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

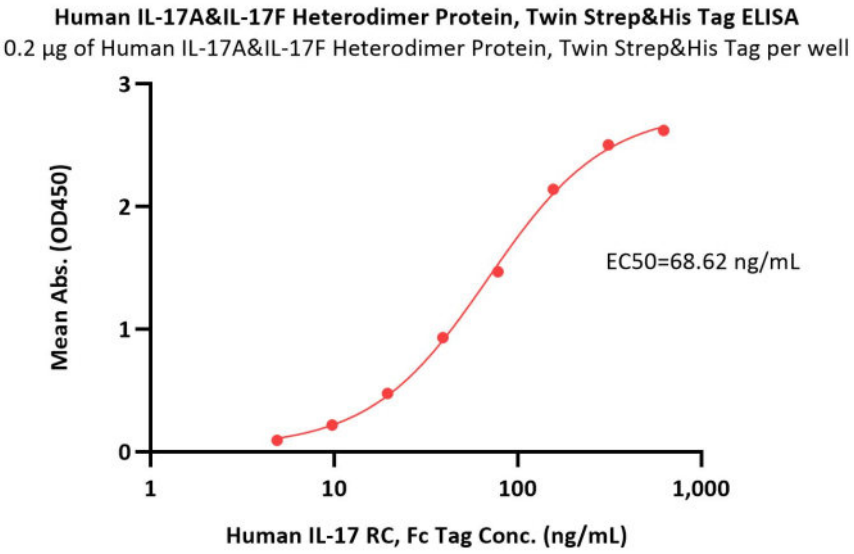


The purity of Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) is more than 85% and the molecular weight of this protein is around 35-52 kDa verified by SEC-MALS.
Report

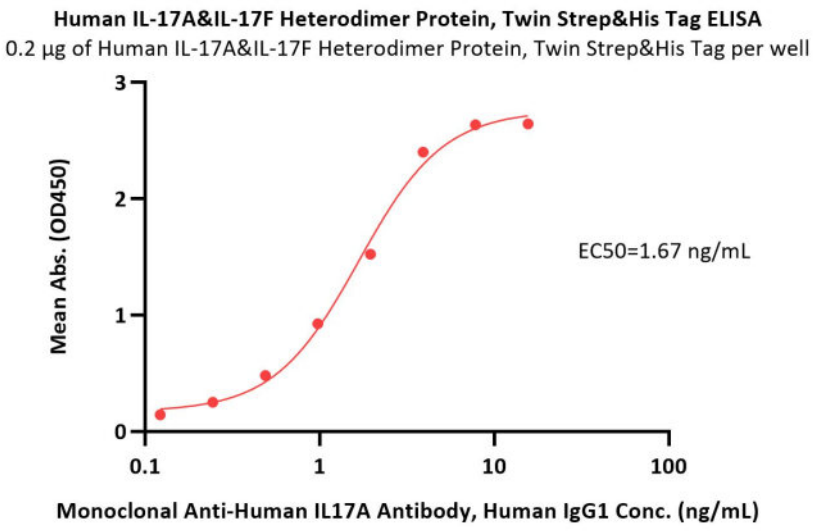
Bioactivity-ELISA



Immobilized Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) at 2 μg/mL (100 μL/well) can bind Human IL-17 RA, Fc Tag (MALS verified) with a linear range of 0.6-10 ng/mL (QC tested).

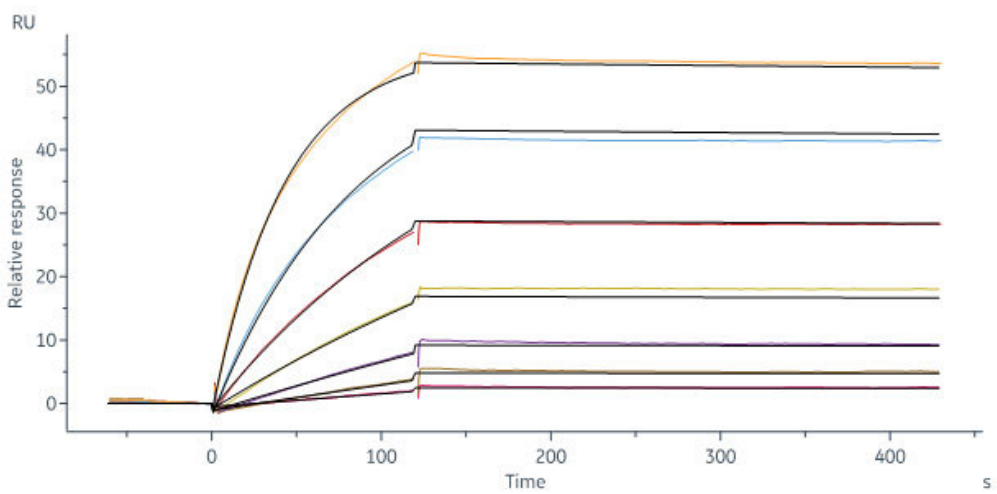


Immobilized Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) at 2 μg/mL (100 μL/well) can bind Human IL-17 RC, Fc Tag (Cat. No. ILC-H5259) with a linear range of 5-78 ng/mL (Routinely tested).



Immobilized Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) at 2 μg/mL (100 μL/well) can bind Monoclonal Anti-Human IL17A Antibody, Human IgG1 with a linear range of 0.1-4 ng/mL (Routinely tested).

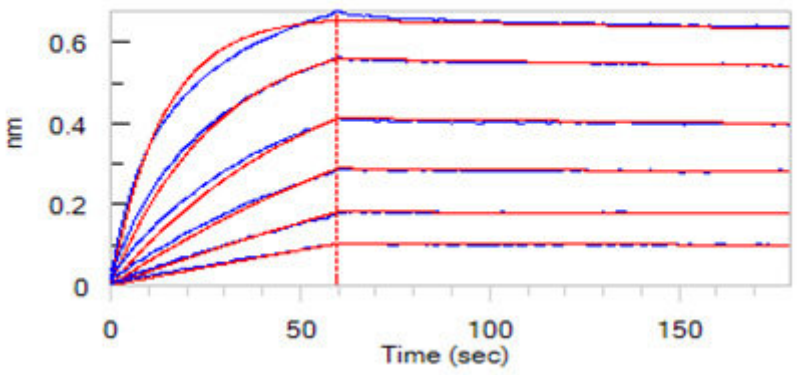
Bioactivity-SPR



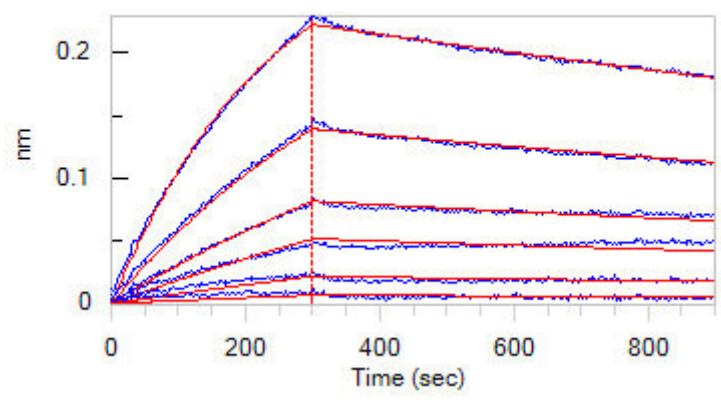
Human IL17RA & IL17RC Protein, Fc Tag&Fc Tag (Cat. No. ILC-H5257) captured on CM5 chip via anti-human IgG Fc antibody can bind Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-

H52W6) with an affinity constant of 50.8 pM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-BLI

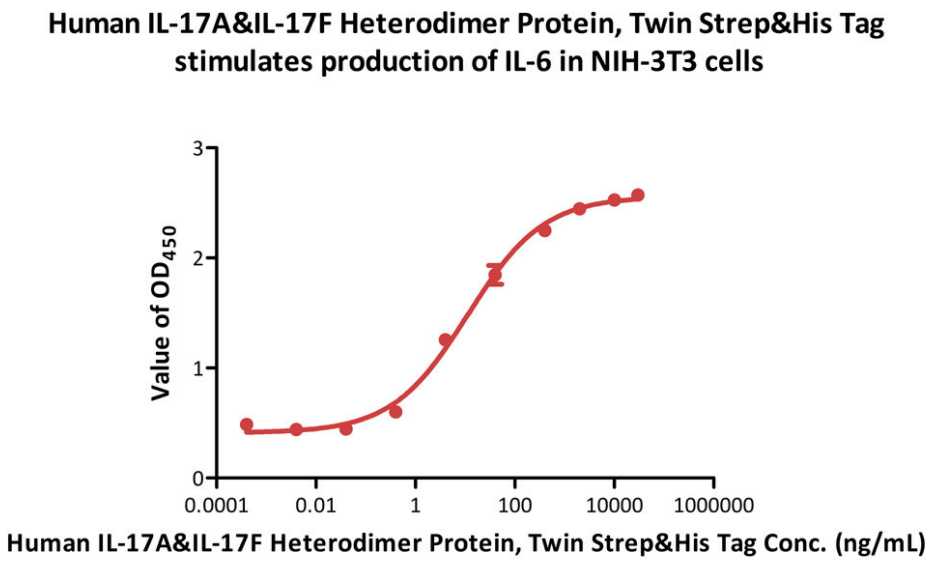


Loaded Human IL-17 RA, Fc Tag on Protein A Biosensor, can bind Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) with an affinity constant of 3.70 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) on NTA Biosensor, can bind Human IL-17 RC, Fc Tag (Cat. No. ILC-H5259) with an affinity constant of 92.3 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-Bioactivity CELL BASE



Human IL-17A&IL-17F Heterodimer Protein, Twin Strep&His Tag (Cat. No. ILF-H52W6) stimulates production of IL-6 in NIH-3T3 cells in the presence of 200 ng/mL human TNF-alpha. The EC50 for this effect is 11.34-12.46 ng/mL (Routinely tested).

Background

Interleukin-17A (IL17A) is also known as cytotoxic T-lymphocyte-associated antigen 8 (CTLA8),which is a proinflammatory cytokine produced by activated T cells. IL17A can regulate the activities of NF-kappaB and mitogen-activated protein kinases. Also,IL17A can stimulate the expression of IL6 and cyclooxygenase-2 (PTGS2/COX-2), as well as enhance the production of nitric oxide (NO).Furthermore,IL17A has been found both in glycosylated and nonglycosylated forms. High levels of IL-17 are associated with several chronic inflammatory diseases including rheumatoid arthritis, psoriasis and multiple sclerosis.

Clinical and Translational Updates