

Synonym

IL2,TCGF,lymphokine,Interleukin 2

Source

Biotinylated Human IL-2, Fc,Avitag(IL2-H82F3) is expressed from human 293 cells (HEK293). It contains AA Ala 21 - Thr 153 (Accession # [P60568-1](#)).

Predicted N-terminus: Pro

Molecular Characterization

Fc(Pro 100 - Lys 330) P01857	IL-2(Ala 21 - Thr 153) P60568-1	Avi
---------------------------------	------------------------------------	-----

This protein carries a human IgG1 Fc tag at the N-terminus and an Avi tag (Avitag™) at the C-terminus

The protein has a calculated MW of 43.7 kDa. The protein migrates as 45-50 kDa under reducing (R) condition (SDS-PAGE) 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

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in

Tris with Glycine, Arginine and NaCl, pH7.5 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.

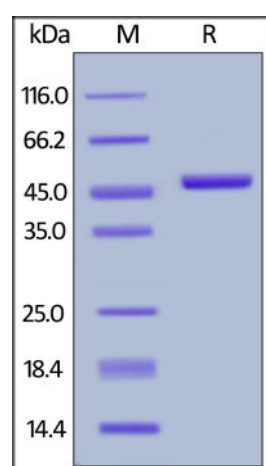
Storage

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

Please avoid repeated freeze-thaw cycles.

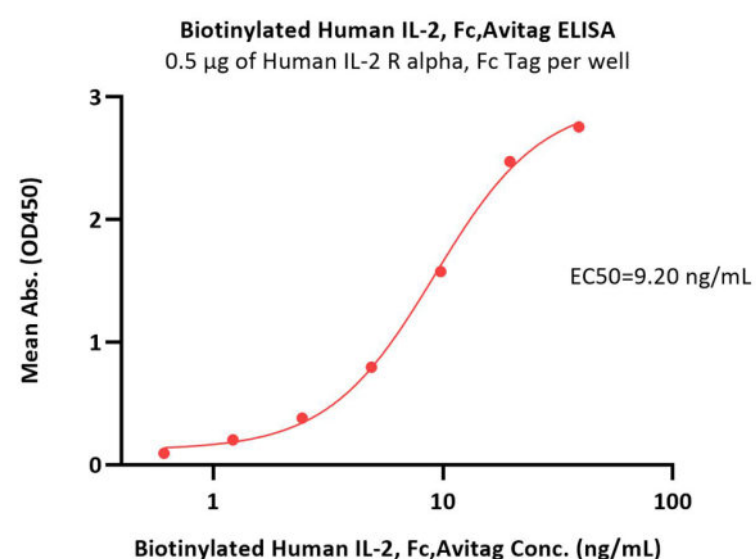
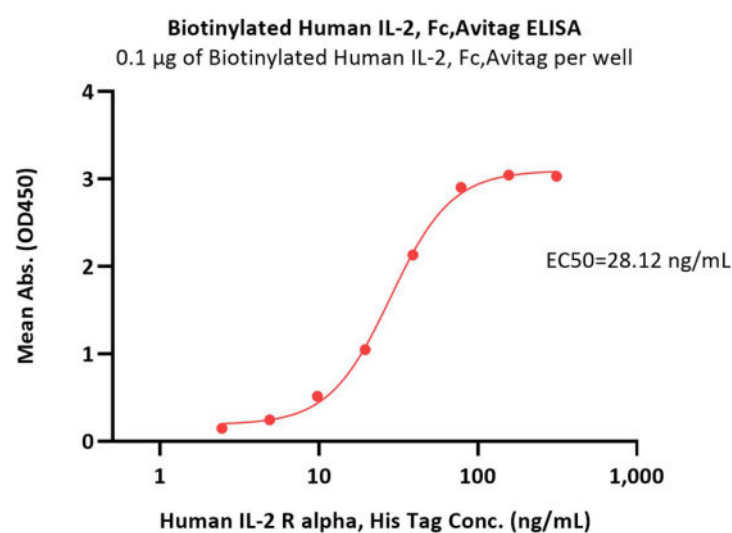
This product is stable after storage at:

- -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-2, Fc,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

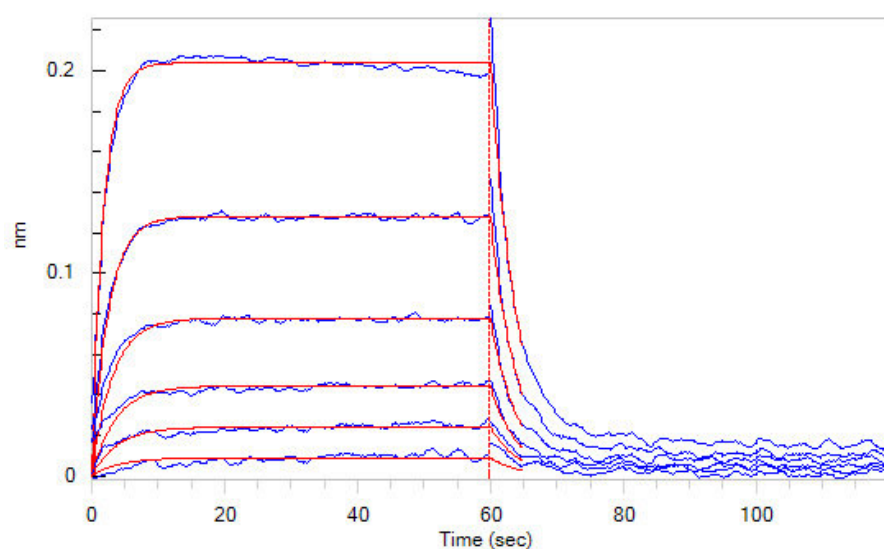
Bioactivity-ELISA



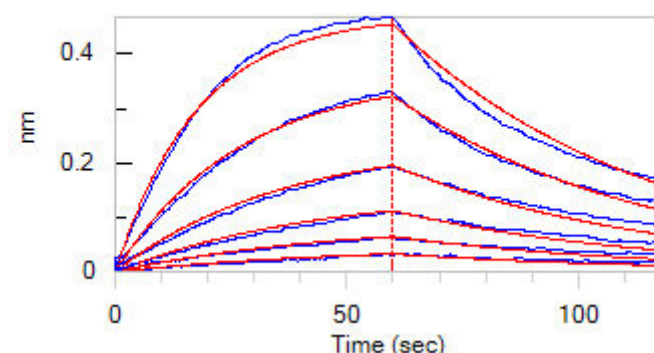
Immobilized Biotinylated Human IL-2, Fc,Avitag (Cat. No. IL2-H82F3) at 1 µg/mL (100 µL/well) on streptavidin precoated (0.2 µg/well) plate, can bind Human IL-2 R alpha, His Tag (Cat. No. ILA-H52H9) with a linear range of 1-39 ng/mL (QC tested).

Immobilized Human IL-2 R alpha, Fc Tag (Cat. No. ILA-H5251) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-2, Fc,Avitag (Cat. No. IL2-H82F3) with a linear range of 0.6-10 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human IL-2, Fc,Avitag (Cat. No. IL2-H82F3) on SA Biosensor, can bind Human IL-2 R beta, His Tag (SPR verified) (Cat. No. CD2-H5221) with an affinity constant of 2.4 µM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Human IL-2, Fc,Avitag (Cat. No. IL2-H82F3) on SA Biosensor, can bind Human IL-2 R alpha, His Tag (Cat. No. ILA-H52H9) with an affinity constant of 47.1 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Interleukin-2 (IL-2) is an interleukin, a type of cytokine immune system signaling molecule, which is a leukocytotropic hormone that is instrumental in the body's natural response to microbial infection and in discriminating between foreign (non-self) and self. IL-2 mediates its effects by binding to IL-2 receptors, which are expressed by lymphocytes, the cells that are responsible for immunity. Mature human IL-2 shares 56% and 66% aa sequence identity with mouse and rat IL-2, respectively. Human and mouse IL-2 exhibit crossspecies activity. The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes. IL-2 is also necessary during T cell development in the thymus for the maturation of a unique subset of T cells that are termed regulatory T cells (T-regs). After exiting from the thymus, T-Regs function to prevent other T cells from recognizing and reacting against "self antigens", which could result in "autoimmunity". T-Regs do so by preventing the responding cells from producing IL-2. Thus, IL-2 is required to discriminate between self and non-self, another one of the unique characteristics of the immune system.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.

