Human IL-2 Protein, Fc Tag (MALS verified)

Catalog # IL2-H5269

Synonym

IL2,TCGF,lymphokine,Interleukin 2

Source

Human IL-2 Protein, Fc Tag(IL2-H5269) is expressed from human 293 cells (HEK293). It contains AA Ala 21 - Thr 153 (Accession # P60568-1).
Predicted N-terminus: Ala 21

Molecular Characterization

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

This protein carries a human IgG1 Fc tag at the N-terminus.

The protein has a calculated MW of 41.9 kDa. The protein migrates as 45-50 kDa 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.

>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

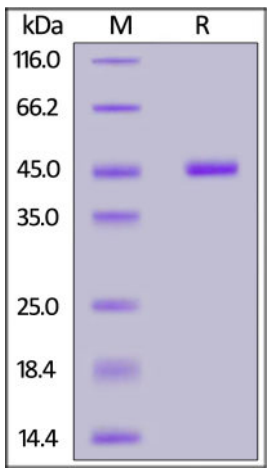
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

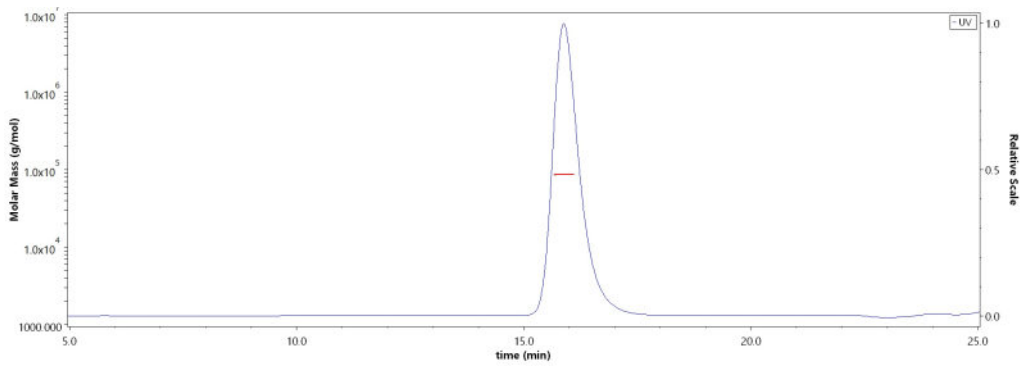
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



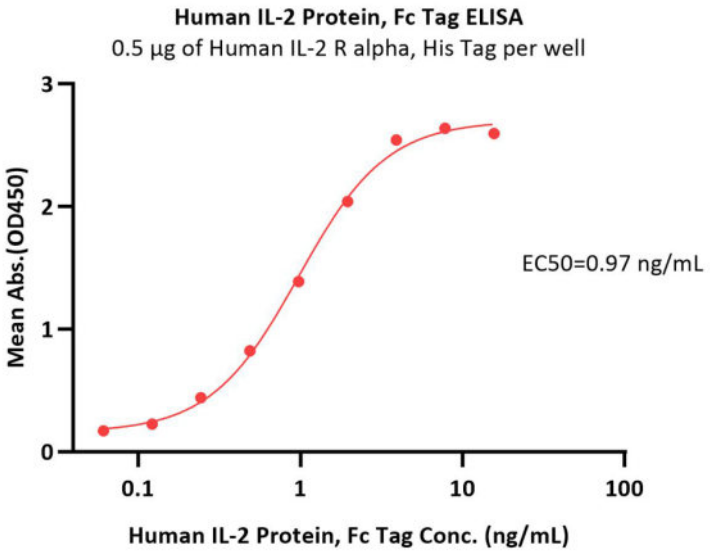
Human IL-2 Protein, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

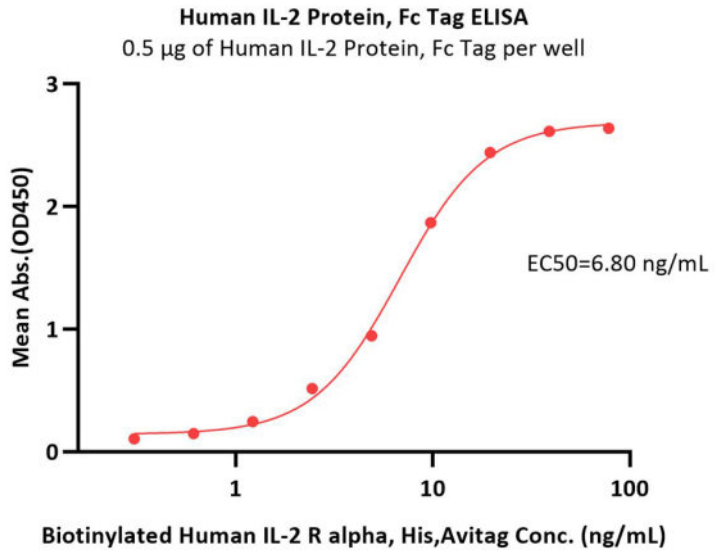


The purity of Human IL-2 Protein, Fc Tag (Cat. No. IL2-H5269) is more than 90% and the molecular weight of this protein is around 80-98 kDa verified by SEC-MALS.
Report

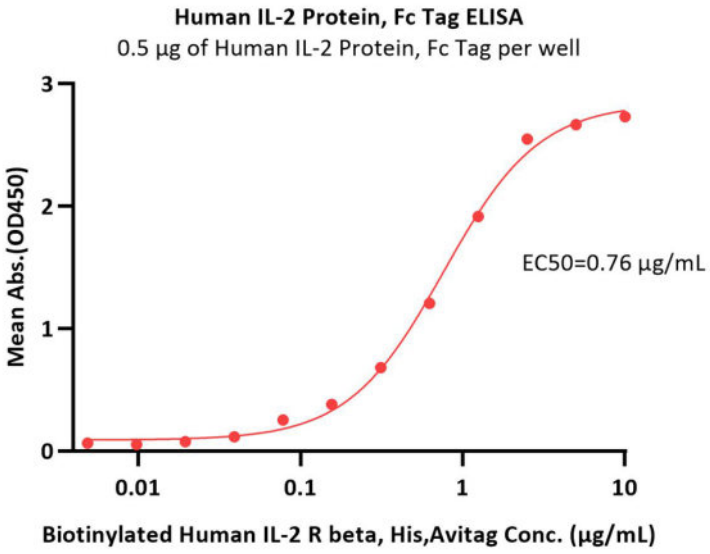
Bioactivity-ELISA



Immobilized Human IL-2 R alpha, His Tag (Cat. No. ILA-H52H9) at 5 μg/mL (100 μL/well) can bind Human IL-2 Protein, Fc Tag (Cat. No. IL2-H5269) with a linear range of 0.1-2 ng/mL (QC tested).



Immobilized Human IL-2 Protein, Fc Tag (Cat. No. IL2-H5269) at 5 μg/mL (100 μL/well) can bind Biotinylated Human IL-2 R alpha, His,Avitag (Cat. No. ILA-H82E6) with a linear range of 0.3-20 ng/mL (Routinely tested).



Immobilized Human IL-2 Protein, Fc Tag (Cat. No. IL2-H5269) at 5 μg/mL (100 μL/well) can bind Biotinylated Human IL-2 R beta, His,Avitag (Cat. No. ILB-H82E3) with a linear range of 0.005-1.25 μg/mL (Routinely tested).

Background

Interleukin-2 (IL-2) is an interleukin, a type of cytokine immune system signaling molecule, which is a leukocytotrophic 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