

**Synonym**

IL2,TCGF,lymphokine,Interleukin 2

**Source**

Human IL-2, Tag Free (IL2-H4113) is expressed from E.coli cells. It contains AA Ala 21 - Thr 153 (Accession # [P60568-1](#)).

Predicted N-terminus: Ala 21

**Molecular Characterization**

**IL-2(Ala 21 - Thr 153)**  
**P60568-1**

This protein carries no "tag".

The protein has a calculated MW of 15.4 kDa. The protein migrates as 15 kDa under reducing (R) condition (SDS-PAGE).

**Endotoxin**

Less than 0.1 EU per µg by the LAL method.

**Purity**

&gt;95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in 20 mM PB, pH3.5. Normally trehalose is added as protectant before lyophilization.

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.*

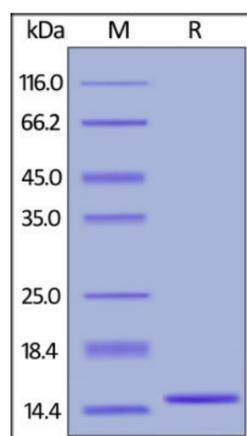
**Storage**

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

*Please avoid repeated freeze-thaw cycles.*

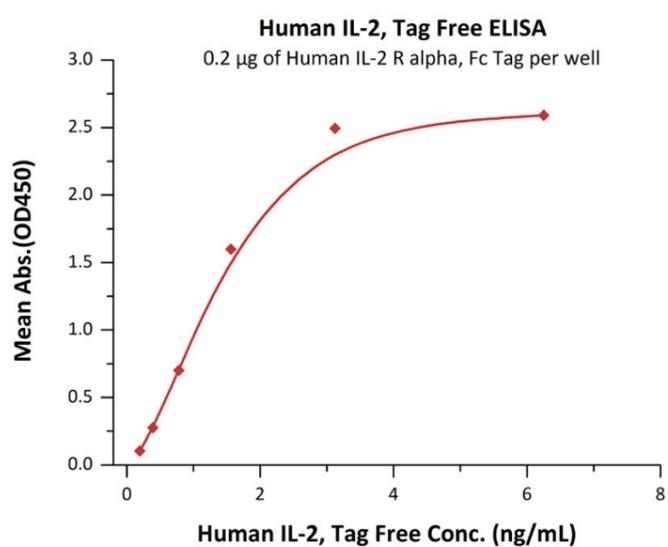
This product is stable after storage at:

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

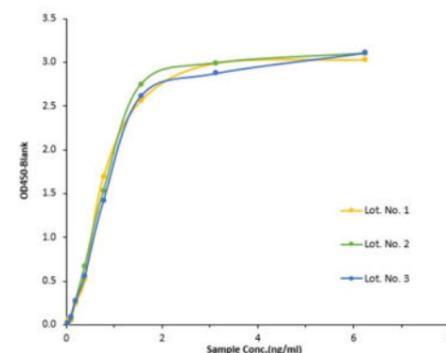
**SDS-PAGE**

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

**Bioactivity-ELISA**



Batch consistency

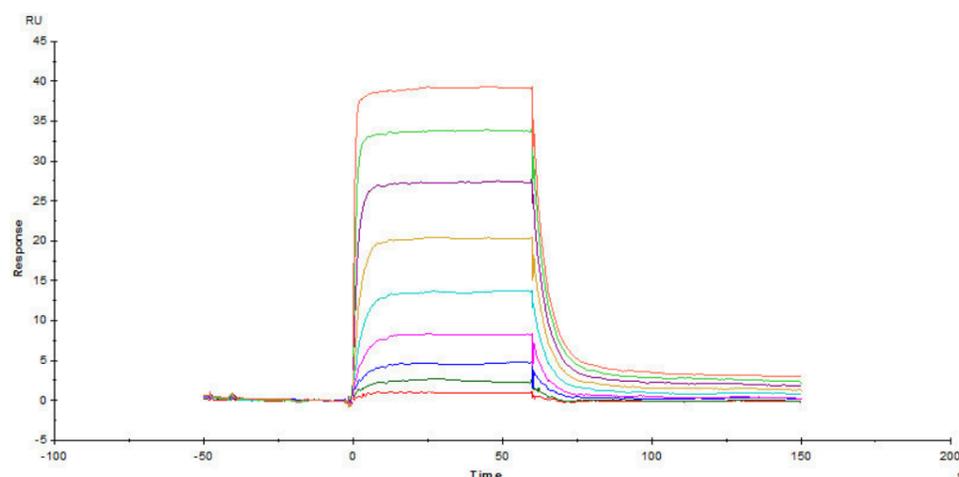


| Lot. No.   | EC50(µg/mL) |
|------------|-------------|
| Lot. No. 1 | 0.0007      |
| Lot. No. 2 | 0.0007      |
| Lot. No. 3 | 0.0008      |

[Report](#)

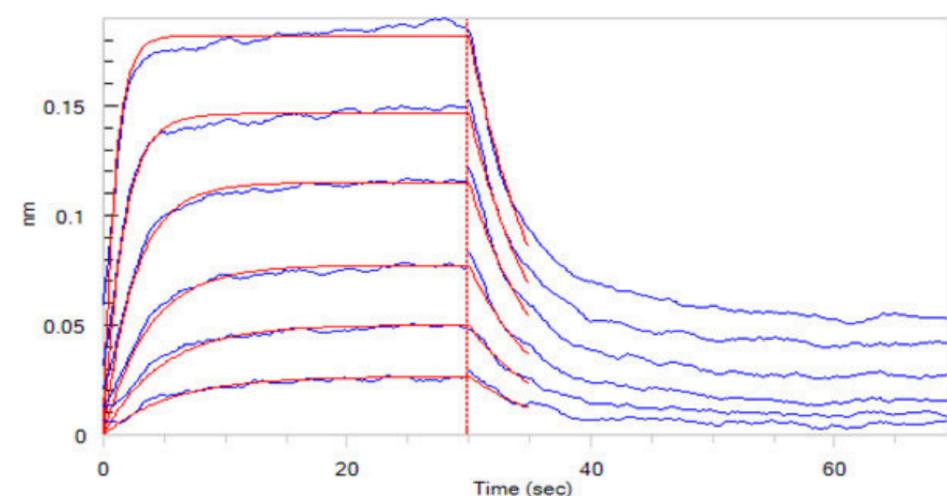
Immobilized Human IL-2 R alpha, Fc Tag (Cat. No. [ILA-H5251](#)) at 2µg/mL (100 µL/well) can bind Human IL-2, Tag Free (Cat. No. [IL2-H4113](#)) with a linear range of 0.2-1.56 ng/mL (QC tested).

**Bioactivity-SPR**

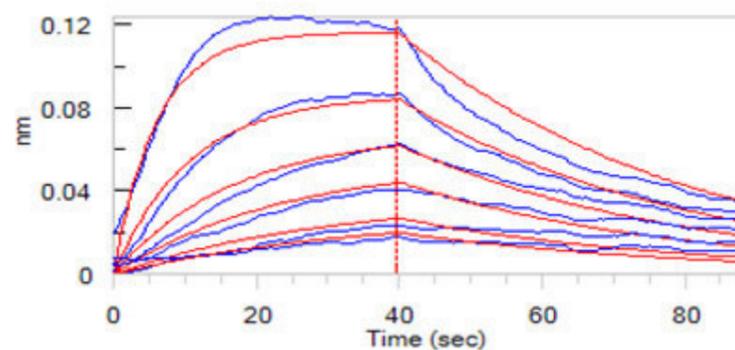


Human IL-2 R beta, Fc Tag (Cat. No. [ILB-H5253](#)) captured on CM5 chip via anti-human IgG Fc antibody, can bind IL-2, Tag Free (Cat. No. [IL2-H4113](#)) with an affinity constant of 0.6 µM as determined in a SPR assay (Biacore T200) (Routinely tested).

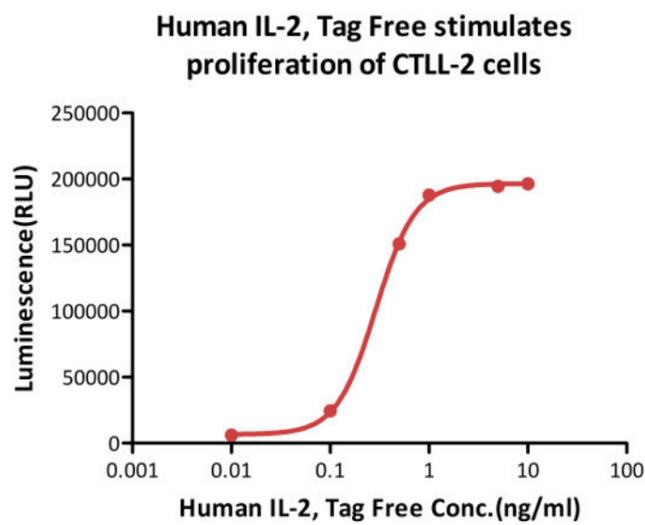
**Bioactivity-BLI**



Loaded Human IL-2 R beta, His Tag (SPR verified) (Cat. No. [CD2-H5221](#)) on HIS1K Biosensor, can bind Human IL-2, Tag Free (Cat. No. [IL2-H4113](#)) with an affinity constant of 0.46 µM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human IL-2 R alpha, His Tag (Cat. No. [ILA-H52H9](#)) on HIS1K Biosensor, can bind Human IL-2, Tag Free (Cat. No. [IL2-H4113](#)) with an affinity constant of 18 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

**Bioactivity-Cell based assay**

Human IL-2, Tag Free (Cat. No. IL2-H4113) stimulates proliferation of CTLL-2 cells. The ED50 for this effect is 0.284-0.355 ng/ml (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](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.