

**Synonym**

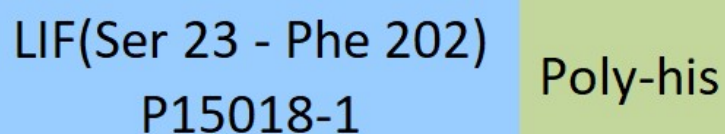
LIF,CDF,DIA,HILDA,MLPLI

**Source**

Human LIF, His Tag(LIF-H52H3) is expressed from human 293 cells (HEK293).

It contains AA Ser 23 - Phe 202 (Accession # [P15018-1](#) ).

Predicted N-terminus: Ser 23

**Molecular Characterization**


This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 21.6 kDa. The protein migrates as 40-50 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

&gt;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.

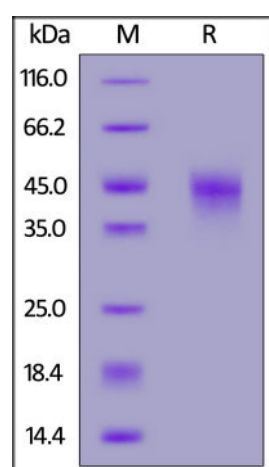
*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***Storage**

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

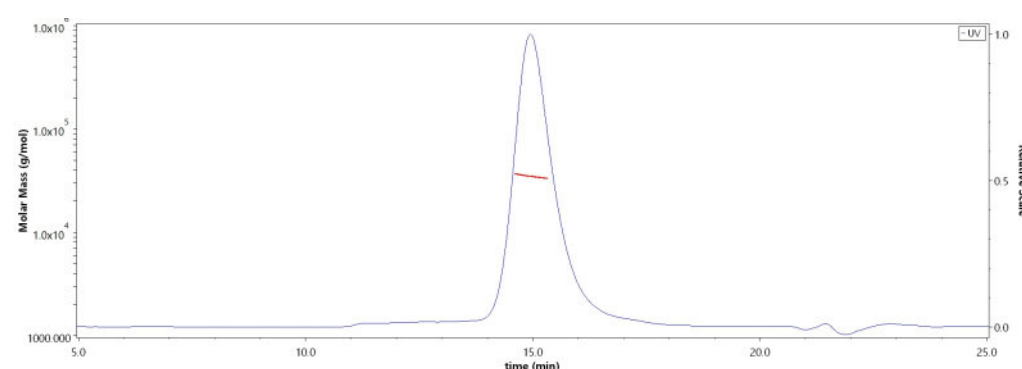
*Please avoid repeated freeze-thaw cycles.*

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.

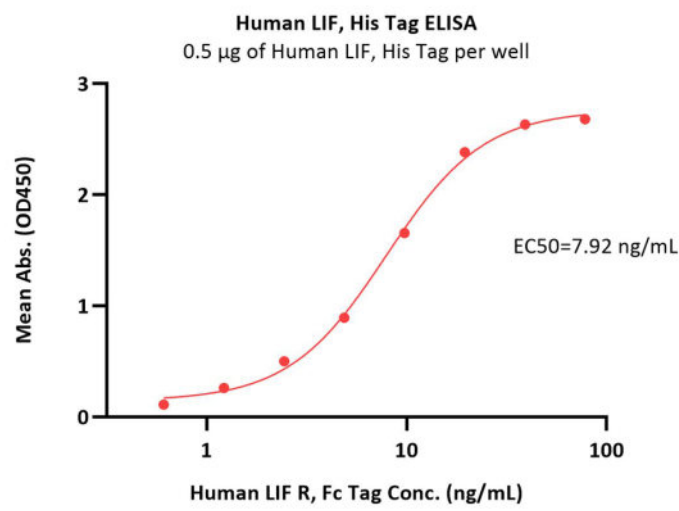
**SDS-PAGE**

Human LIF, His Tag 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****SEC-MALS**

The purity of Human LIF, His Tag (Cat. No. LIF-H52H3) is more than 85% and the molecular weight of this protein is around 28-42 kDa verified by SEC-MALS.

[Report](#)



Immobilized Human LIF, His Tag (Cat. No. LIF-H52H3) at 5 µg/mL (100 µL/well) can bind Human LIF R, Fc Tag (Cat. No. LIR-H4252) with a linear range of 1-20 ng/mL (QC tested).

## Background

Leukemia inhibitory factor, or LIF, an interleukin 6 class cytokine, is a protein in cells that affects cell growth and development. Leukemia Inhibitory Factor has several functions such as cholinergic neuron differentiation, control of stem cell pluripotency, bone & fat metabolism, mitogenesis of factor dependent cell lines & promotion of megakaryocyte production in vivo.

Removal of LIF pushes stem cells toward differentiation, but they retain their proliferative potential or pluripotency. Therefore LIF is used in mouse embryonic stem cell culture. It is necessary to maintain the stem cells in an undifferentiated state, however genetic manipulation of embryonic stem cells allows for LIF independent growth, notably overexpression of the gene Nanog. LIF is not required for culture of human embryonic stem cells.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.