

Recombinant Human Leukemia inhibitory factor/LIF Protein

Catalog No.: RP01697 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	3976	P15018

Tags

NO-tag

Synonyms

CDF; DIA; HILDA; MLPLI; LIF

Background

Leukemia inhibitory factor (LIF) is a pleiotropic glycoprotein belonging to the IL-6 family of cytokines. It is involved in growth promotion and cell differentiation of different types of target cells, influence bone metabolism, cachexia, neural development, embryogenesis, and inflammation. LIF has potent proinflammatory properties, being the inducer of the acute phase protein synthesis and affecting cell recruitment into the area of damage or inflammation. LIF is also one of the cytokines that are capable to regulate the differentiation of embryonic stem cells, hematopoietic, and neuronal cells.

Basic Information

Description

Recombinant Human Leukemia inhibitory factor/LIF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ser23-Phe202) of human Leukemia inhibitory factor/LIF (Accession #NP_002300.1) fused with no additional amino acid.

Bio-Activity

Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. Kitamura, T. et al. (1989) J. Cell Physiol. 140:323. The ED_{50} for this effect is 0.14-0.54 ng/mL, corresponding to a specific activity of 1.85×10^6 - 7.14×10^6 units/mg.

Storage

Store the lyophilized protein at -20°C to -80°C for 12 months.
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.
Avoid repeated freeze/thaw cycles.

Product Information

Source	Purification
HEK293 cells	> 92% by SDS-PAGE.

Endotoxin

<0.1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

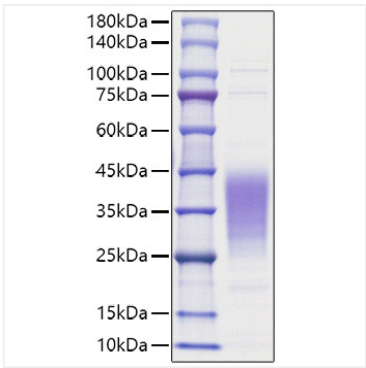
Reconstitution

Centrifuge the vial before opening.
Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

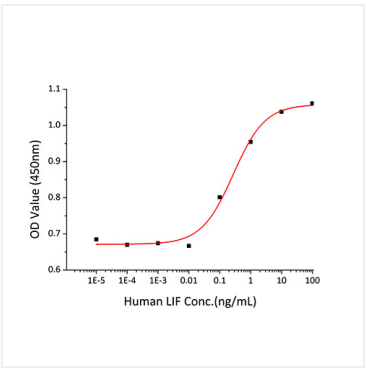
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Validation Data



Recombinant Human Leukemia inhibitory factor/LIF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 30-45 kDa.



Recombinant Human LIF stimulates cell proliferation of the TF-1 human erythroleukemic cells. The ED₅₀ for this effect is 0.14-0.54 ng/mL, corresponding to a specific activity of 1.85×10⁶-7.14×10⁶ units/mg.