

Recombinant Human Leukemia inhibitory factor /LIF Protein

Catalog No.: RP01697

Sequence Information

Species **Gene ID**
Human 3976

Swiss Prot **Tags**
P15018 NO-tag

Synonyms
CDF; DIA; HILDA; MLPLI; LIF

Product Information

Source **Purification**
HEK293 cells ≥ 90 % as
 determined by
 SDS-PAGE.

Calculated MW **Observed MW**
19.72 kDa 30–45 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

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.

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.

Activity

Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. Kitamura, T. et al. (1989) J. Cell Physiol. 140:323. 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.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at –20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

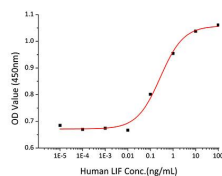
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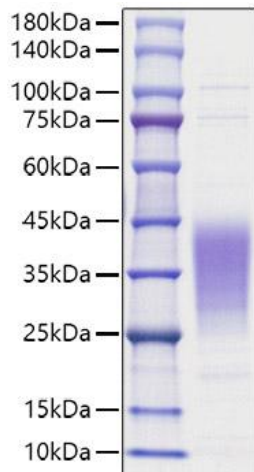
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Validation Data



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.



Recombinant Human Leukemia inhibitory factor/LIF Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.