



## Leukemia Inhibitory Factor, human recombinant (rHuLIF)

**Catalog No:** 97246  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** CDF, HILDA, D-FACTOR, Differentiation- stimulating factor, Melanoma-derived LPL inhibitor, MLPLI, Emfilermin, Leukemia inhibitory factor, LIF, DIA

### Background

Leukemia Inhibitory Factor also called LIF is a lymphoid factor that promotes long-term maintenance of embryonic stem cells by suppressing spontaneous differentiation. 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. Human and mouse LIF exhibit a 78% identity in its amino acid sequence.

### Description

Leukemia Inhibitory Factor (LIF) human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 180 amino acids and having a molecular mass of 19.7 kDa. Leukemia Inhibitory Factor (LIF) is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Leukemia Inhibitory Factor (LIF) was lyophilized from a concentrated (1 mg/ml) sterile solution containing 1xPBS pH 7.4.

### Solubility

It is recommended to reconstitute the lyophilized LIF in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Leukemia Inhibitory Factor (LIF), although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Leukemia Inhibitory Factor (LIF) should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

SPLPITPVNA TCAIRHPCHN NLMNQIRSQL AQLNGSANAL FIFYTAQGE PFPNNLDKLC GPNVTDFFPF HANGTEKAKL  
VELYRIVVYL GTSLGNITRD QKILNPSALS LHSKLNATAD ILRGLLSNVL CRLCSKYHVG HVDVTYGPDY SGKDVVFQKKK  
LGCQLLGKYG QIIAVLAQAF

### Activity

The ED50 was determined by the M1 cell differentiation assay is <0.01 ng/ml, corresponding to a specific activity of 100,000,000 IU/mg.

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### Usage

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