

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

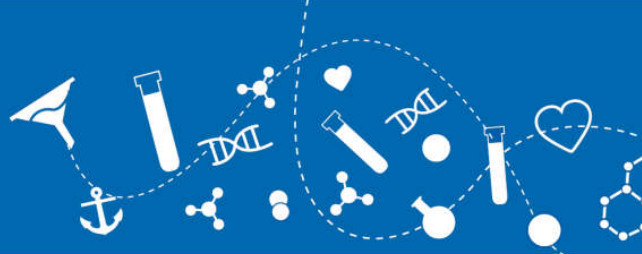
Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

SPLPITPVNA TCAIRHPCHN NLMNQIRSQL AQLNGSANAL FIFYTYAQGE PFPNNLDKLC GPNVTDFFFF 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.



Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.