

Leukemia Inhibitory Factor, mouse recombinant (rmLIF)

Catalog No: 97247
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) murine recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 181 amino acids and having a molecular mass of 20 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 20 mM phosphate buffer pH 7.4 and 0.02% Tween-20.

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.

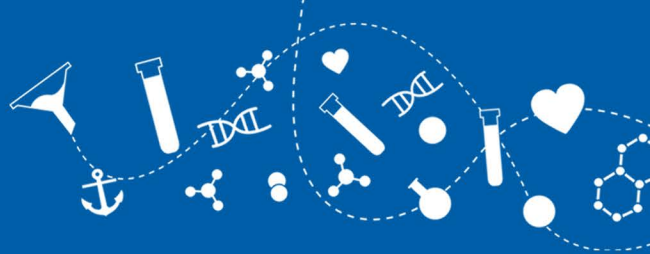
Amino Acid Sequence

MSPLPITPVN ATCAIRHPCH GNLNMQIKNQ LAQLNGSANA LFISYYTAQG EFPNNVEKL CAPNMTDFPS FHGNGTEKTK
LVELYRMVAY LSASLTNITR DQKVLNPTAV SLQVKLNATI DVMRGLLSNV LCRLCNKYRV GHVDVPPVPD HSDKEAFQRK
KLGQQLLGTY KQVISVVVQA F

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**Activity**

Activity of murine LIF was determined by the M1 cell differentiation assay which was found to be <0.01 ng/ml, corresponding to a specific activity of 100,000,000 IU/mg. A standard of 50 Units is defined as the concentration of mouse LIF in 1.0 mL of tissue culture medium that induces the differentiation of 50% of M1 colonies.

Usage

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