Leukemia Inhibitory Factor, rat recombinant (rrLIF)

Catalog No: 97640
Lot No: XXXXX
Source: *E. coli*
Synonyms: Leukemia inhibitory factor, Cholinergic neuronal differentiation factor, Lif

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) Rat Recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 180 amino acids and having a molecular mass of 19.8 kDa. Leukemia Inhibitory Factor (LIF) is purified by proprietary chromatographic techniques.

Physical Appearance
Sterile filtered white lyophilized (freeze-dried) powder.

Formulation
LIF Rat was lyophilized from 0.2 µm filtered concentrated solution in 1 x PBS, pH 7.4.

Solubility
It is recommended to reconstitute the lyophilized Leukemia Inhibitory Factor (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 96.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence
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SPLPITPVNA TCAIRHPCHG NLMNQIKSQL AQLNGSANAL FISYYTAQGE PFPNNVDKLC APNMTDFPPF HANGTEKTKL
VELYRMVTYL GASLTNITWD QKNLNPTAVS LQIKLNATTD VMRGLLSSVL CRLCNKYHVG HVDVPCVPDN SSKEAFQRKK
LGCQLLGTYK QVISVLAQAF
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Activity
The activity of rat LIF is determined by the ability to induce differentiation of M1 myeloid leukemic cells. The minimum detectable concentration of rat LIF in this assay is 0.5 ng/ml.

Usage

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