Recombinant Mouse Leukemia Inhibitory Factor

Cat. No. Lif-23M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Leukemia inhibitory factor produced in*E. coli*is a single non-glycosylated polypeptide chain containing 181 amino acids and having a molecular mass of 20kDa.
Species	Mouse
Source	E.coli
Description	Leukemia Inhibitory Factor (LIF) is a lymphoid factor which promotes long-term maintenance of embryonic stem cells by suppressing spontaneous differentiation. LIF has a number of other activities including cholinergic neuron differentiation, control of stem cell pluripotency,bone and fat metabolism, mitogenesis of certain factor dependent cell lines and promotion of megakaryocyte production in vivo. Mouse LIF is a 20 kDa protein containing 181 amino acid residues.
Purity	>98% by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized from a 0.2mm filtered concentrated (1.0mg/ml) solution in PBS, pH 7.4.
Specific Activity	The activity of mouse LIF is determined by the ability to induce differentiation of murine M1myeloid leukemic cells. The minimum detectable concentration of mouse LIF in this assay is 0.5 ng/mL. The specific activity is >1 x 10^8units/mg, where 50 units is defined as the amountof mouse LIF required to induce differentiation in 50% of the M1 colonies in 1 mL agarcultures.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Endotoxin	Less than 1EU/mg of rmLIF as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤20°C. Further dilutions should be made in appropriate buffered solutions.
Storagee	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

GENE INFORMATION

Gene Name	LIF
Synonyms	OTTMUSP00000005253; CDF; D-FACTOR; Emfilermin; HILDA; MLPLI; D factor; Differentiation- stimulating factor; Leukemia inhibitory factor precursor; Melanoma-derived LPL inhibitor; Cholinergic differentiation factor; Lif; leukemia inhibitory factor
Gene ID	16878
mRNA Refseq	NM_001039537
Protein Refseq	NP_001034626
MIM	159540

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UniProt ID	P09056
Chromosome Location	Chr 11: 4.16 - 4.17 Mb
Pathway	Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway
Function	cytokine activity; growth factor activity; leukemia inhibitory factor receptor binding
PDBrendering based on 1LKI. Available structures:1emr,1lki,1pv	

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