

Overview

Synonyms	CDF, HILDA, D-FACTOR, Differentiation- stimulating factor, Melanoma-derived LPL inhibitor, MLPLI, Emfilermin, Leukemia inhibitory factor, LIF, DIA
Description	<p>Leukemia Inhibitory Factor (LIF) is a pleiotropic cytokine belonging to the long four-helix bundle cytokine superfamily. LIF shares tertiary structure with several other cytokines, including Interleukin-6 (IL-6), Oncostatin M, ciliary neurotropic factor, and cardiotrophin-1, and their functions in vivo are also redundant to some extent. LIF can bind to the common receptor of IL-6 subfamily, gp130, and then recruit its own receptor LIF Receptor to form a ternary complex. The basal expression of LIF in vivo is low; and its expression is induced by pro-inflammatory factors, including lipopolysaccharide, IL-1, and IL-17, and inhibited by anti-inflammatory agents, including IL-4 and IL-13. The functions of LIF include proliferation of primordial germ cells, regulation in blastocyst implantation and early pregnancy, and maintenance of pluripotent embryonic stem cells.</p> <p>Recombinant mouse Leukemia Inhibitory Factor (rmLIF) produced in <i>E. coli</i> is a single non-glycosylated polypeptide chain containing 180 amino acids. A fully biologically active molecule, rmLIF has a molecular mass of 19.9 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.</p>
Accession No	P09056
Species	Mouse
Source	<i>E. coli</i>
Biological Activity	ED ₅₀ < 0.01 ng/mL, measured by a cell differentiation assay using M1 cells, corresponding to a specific activity of > 1.0× 10 ⁸ units/mg.
Sequence	<p>SPLPITPVNA TCAIRHPCHG NLMNQIKNQL AQLNGSANAL FISYYTAQGE PFPNNVEKLC APNMTDFPSF HGNGTEKTKL VELYRMVAYL SASLTNITRD QKVLNPTAVS LQVKLNATID VMRGLLSNVL CRLCNKYRVG HVDVPPVPDH SDKEAFQRKK LGCQLLGTYK QVISVVVQAF SPLPITPVNA TCAIRHPCHG NLMNQIKNQL AQLNGSANAL FISYYTAQGE PFPNNVEKLC APNMTDFPSF HGNGTEKTKL VELYRMVAYL SASLTNITRD QKVLNPTAVS LQVKLNATID VMRGLLSNVL CRLCNKYRVG HVDVPPVPDH SDKEAFQRKK LGCQLLGTYK QVISVVVQAF</p>

Properties

Measured Molecular Weight	19.9 kDa, observed by reducing SDS-PAGE.
Purity	> 95% by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized after extensive dialysis against 50 mM Tris, 150 mM NaCl, pH8.0.
Reconstitution	Reconstituted in ddH ₂ O at 100 µg/mL.
Endotoxin Level	< 0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant mouse Leukemia Inhibitory Factor (rmLIF) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rmLIF should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.
Note	For research use only

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