



Recombinant Human Leukemia Inhibitory Factor (rhLIF)

Catalog #103-07

Description

Leukemia inhibitory factor (LIF) is a member of Interleukin 6 family. This protein is mainly expressed in the trophoblast of the developing embryo, with its receptor LIFR expressed throughout the inner cell mass. LIF has the capacity to induce terminal differentiation in leukemic cells. Its activities include the induction of hematopoietic differentiation in normal and myeloid leukemia cells, the induction of neuronal cell differentiation, and the stimulation of acute-phase protein synthesis in hepatocytes. LIF is used in mouse embryonic stem cell culture, because that removal of LIF pushes stem cells toward differentiation, but they retain their proliferative potential or pluripotency. It is also used in phase II clinical trial, which can assist embryo implantation in women who have failed to become pregnant despite assisted reproductive technologies (ART). Mature human LIF (180 a.a.) shares 78 %, 82 %, 91 %, 88 % and 87 % a.a. sequence identity with mouse, rat, canine, bovine, and porcine LIF, respectively.

Specifications

Synonyms:	Differentiation-stimulating Factor, D Factor, Melanoma-derived LPL Inhibitor, MLPLI
AA Sequence:	SPLPITPVNA TCAIRHPCHN NLMNQIRSQL AQLNGSANAL FILYYTAQGE PFPNNLDKLC GPNVTDFPPF HANGTEKAKL VELYRIVVYL GTSLGNITRD QKILNPSALS LHSKLNATAD ILRGLLSNVL CRLCSKYHVG HVDVITYGPD SGKDVFQKKK LGCQLLGKYK QIIAVLAQAF
Source:	<i>Escherichia coli</i>
Molecular Weight:	19.7 kDa, a single non-glycosylated polypeptide chain containing 180 amino acids
Purity	> 95%
Physical Appearance:	White lyophilized powder.
Endotoxin:	<0.1 ng/μg of protein (<1 EU/μg)

Formulation

Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.

Reconstitution

Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.

Shipping and Storage

Gel pack. Upon receipt, store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20 °C. Avoid repeated freeze/ thaw cycles.

Usage

rhLIF is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.