

# Certificate of Analysis



Recombinant Animal-Free Human LIF  
Catalog Number: 100-47AF  
Lot Number: 0813-100-47AF

## Product Description

**Alternate Names:** Leukocyte Inhibitory Factor      **Accession/Uniprot Number:** P15018

**Description:** Leukemia inhibitory factor (LIF) is a member of the interleukin 6 (IL-6) family that is made by a variety of adult and embryonic tissues. LIF signals through the glycoprotein 130 (gp130)/LIF receptor (LIFR) heterodimer to activate STAT3 and MAPK signaling. LIF functions during hematopoietic differentiation, neuronal cell differentiation, kidney development, and inflammatory processes. Human LIF may also be an important factor during human embryonic stem cell (hESC) self-renewal, pluripotency, and embryonic implantation.

**Source:** Genetically modified *E.coli*. **This product is produced with no animal-derived raw products. All processing and handling employs animal-free equipment and animal-free protocols.**

**Predicted MW:** Monomer, 19.8 kDa (181 amino acids)

**AA Sequence:** MSPLPITPVN ATCAIRHPCH NNLMNQIRSQ LAQLNGSANA LFILYYTAQG EPPFNLDKL CGPNVTDFFP  
FHANGTEKAK LVELYRIVVY LGTSLGNITR DQKILNPSAL SLHSKLNATA DILRGLLSNV LCRLCSKYHV GHVDVITYGPD  
TSGKDVFQKK KLGCQLLGKY KQIIAVLAQA F

**Formulation:** Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 0.1% Trifluoroacetic Acid (TFA)

## Product Specifications

Specification	Method of Determination	Acceptance Criteria	Result
Purity	Reducing and Non-reducing SDS-PAGE	≥95%	>95%
Endotoxin	Kinetic LAL (50% confidence)	≤ 1 EUs/ug	<0.05 EUs/ug
Biological Activity	TF-1 cell proliferation	ED50 ≤200 pg/mL (≥5.0 x 10 <sup>6</sup> units/mg)	ED50 = 60 pg/mL (1.7 x 10 <sup>7</sup> units/mg)

## Product Preparation and Storage

**Country of Origin:** USA      **Shipping:** Room temperature      **Storage Prior to Reconstitution:** -20°C

**Reconstitution:** Sterile 10 mM acetic acid at 0.1 mg/mL

**Date of Recon.:** \_\_\_\_\_ **Initials:** \_\_\_\_\_

Centrifuge vial before opening. Suspend the product by gently pipetting the above recommended solution down the sides of the vial. DO NOT VORTEX. Allow several minutes for complete reconstitution. For prolonged storage, dilute to working aliquots in a 0.1% BSA solution, store at -80°C and avoid repeat freeze thaws.

**Expiration Date:** \_\_\_\_\_ **Date Received:** \_\_\_\_\_

12 months from date of receipt when stored at -20°C to -80°C as supplied.

1 month when stored at 4°C after reconstituting as directed.

3 months when stored at -20°C to -80°C after reconstituting as directed.

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**

X *Olivia Schneider, PhD 3/2/17*

Quality Control