

## GFH200 Recombinant Human LIF

### 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.

<b>Length</b>	181 aa
<b>Molecular Weight</b>	19.8 kDa
<b>Source</b>	E. coli
<b>Accession Number</b>	P09056
<b>Purity</b>	≥95% determined by reducing and non-reducing SDS-PAGE

### Specifications

<b>Alternative Names</b>	Leukocyte Inhibitory Factor, leukemia inhibitory factor, cholinergic differentiation factor
<b>Biological Activity</b>	Specific activity of the sample is approximate $10^8$ units/mg. $10^6$ units, identical $10 \mu\text{g}$ of pure protein, are sufficient to treat 1.0 L of stem cells including human embryonic stem cells, hematopoietic stem cells, mesenchymal stem cells, neural stem cells and induced pluripotent stem cells.
<b>Endotoxin Level</b>	$\leq 1.00$ EU/ $\mu\text{g}$ as measured by kinetic LAL
<b>Formulation</b>	Lyophilized from a volatile solution after reverse phase chromatography.
<b>AA Sequence</b>	MSPLPITPVN ATCAIRHPCH NNLMNQIRSQ LAQLNGSANA LFILYYTAQG EFPFNNLDKL CGPNVTDFFP FHANGTEKAK LVELYRIVVY LGTSLGNITR DQKILNPSAL SLHSKLNATA DILRGLLSNV LCRLCSKYHV GHVDVITYGPD TSGKDVFQKK KLGQCQLLGKY KQIIAVLAQA F

### Preparation and Storage

<b>Reconstitution</b>	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile sterile water at 0.1 mg/ml, which can be further diluted into other aqueous solutions.
<b>Stability and Storage</b>	12 months from date of receipt when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ as supplied. 1 month when stored at $4^{\circ}\text{C}$ after reconstituting as directed. 3 months when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ after reconstituting as directed.