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Animal, Bacterial & Viral Free - Low Endotoxin - Ultra Pure - High BioActivity

LIF

Recombinant Human Leukemia Inhibitory Factor, LIF, Endotoxin Free

Catalog No.	CRO503A	**Quantity:**	10 µg
	CRO503B		50 µg
	CRO503C		100 µg

Alternate Names: Differentiation-stimulating factor, D factor, Melanoma-derived LPL inhibitor (MLPLI).

Description: 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. Human and mouse LIF share 78% homology and activities of LIF are not species-specific. Human LIF is active on mouse cells, but murine LIF is not active on human cells.

UniProtKB: P15018

Gene ID: 3976

Molecular Weight: Recombinant human LIF contains 180 amino acids and a 16 a.a. histidine-based tag for a total length of 196 a.a. and has a predicted molecular mass of 21.8 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 25 -30 kDa in SDS-PAGE.

Source: *Hordeum vulgare* (barley grain). Barley grain endosperm tissue has proteolytic activity that is almost 50 times less than *E. coli* or mammalian cells. Recombinant proteins made in Barley have no human or animal viral contaminants, ideal for stem cell culture and *in vitro* and *in vivo* studies.

MAT Assay: Purified recombinant human LIF carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction.

Formulation: Lyophilized from a 0.2 µm sterile filtered solution of PBS, pH 7.2.

Purity: >98% by SDS-PAGE gel analysis.

Endotoxin Level: < 0.005 ng per µg of product (0.05 EU/µg) as measured by turbidimetric kinetic assay.

Biological Activity: ED_{50} < 0.3 ng/ml. The bioactivity of recombinant human LIF was determined by its ability to induce proliferation of TF-1 cells in a dose dependent manner.

Specific Activity: > 3.3 x 10^6 units/mg

Reconstitution: **Centrifuge vial prior to opening**. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). **Please note that the addition of any carrier protein into this product may introduce endotoxin. Depending upon the particular application employed, this may be undesirable.**

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Storage & Stability: The lyophilized protein, though stable at room temperature for two weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. **Avoid repeated freeze-thaw cycles.**

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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