

Active Recombinant Mouse LIF,His-tagged

Cat. No. Lif-8869M Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse LIF was produced in the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Mouse
Source	Hordeum Vulgare
Description	LIF (leukemia inhibitory factor, myeloid leukemia inhibitory factor) a pleiotropic lymphoid factor was initially described as a factor that inhibits the proliferation of myeloid leukemia cells and induces their differentiation into macrophages. Other activities of LIF include inhibition of adipogenesis, cholinergic neuron differentiation and bone metabolism.
Predicted N Terminal	His
Form	PBS, pH 7.2, sterile filtered.
Bio-activity	The bioactivity of murine LIF was determined by its ability to induce differentiation of murine M1 myeloid leukemia cells. The ED50 value for this effect is typically $< 1 \text{ ng/ml}$ corresponding to $> 5 \times 10^7 \text{ U/mg}$ (where 50 U is defined as the amount of mLIF required to induce differentiation of 50% of M1 cells). The activity is comparable to mLIF from other commercial sources.
Molecular Mass	Recombinant mouse LIF contains 188 amino acids and a 16 a.a. Histidine-based tag for a total length of 204 a.a. and has a predicted molecular mass of 22.8 kDa. As a

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	result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 28-30 kDa in SDS-PAGE.
Endotoxin	Endotoxin level is less than 0.05EU/μg as measured by turbidimetric kinetic assay.
Purity	>95% by SDS-PAGE gel analysis.
Storage	The lyophilized protein is stable at room temperature for few weeks. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	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).

GENE INFORMATION

Gene Name	Lif leukemia inhibitory factor [Mus musculus]
Official Symbol	Lif
Synonyms	LIF; leukemia inhibitory factor; d factor; differentiation-stimulating factor;
Gene ID	16878
mRNA Refseq	NM_001039537
Protein Refseq	NP_001034626
Pathway	Adipogenesis, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved

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biosystem; ESC Pluripotency Pathways, organism-specific biosystem; Jak-STAT signaling pathway, organism-specific biosystem; Jak-STAT signaling pathway, conserved biosystem; MicroRNAs in cardiomyocyte hypertrophy, organism-specific biosystem;

Function

cytokine activity; cytokine activity; growth factor activity; growth factor activity; leukemia inhibitory factor receptor binding; receptor binding;

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