Active Recombinant Mouse Lif, His-tagged

Cat. No. Lif-31M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Lif was produced in the endosperm tissue of barley grain (Hordeum vulgare).
Species	Mouse
Source	Barley Grain
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. 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.
Form	PBS, pH 7.2, sterile filtered.
Bio-activity	Recombinant murine LIF was determined by its ability to induce differentiation of murine M1 myeloid leukemia cells where 50 U is defined as the amount of mLIF required to induce differentiation of 50% of M1 cells. 10 ug of mLIF protein is equivalent to approximately 10e6 activity units. The mLIF has been validated in standard mESC based gene targeting for generation of knock-out mice. We recommend that the optimal concentration for each specific application be determined by an initial dose-response assay.

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Molecular Mass	Recombinant mouse LIF contains 188 amino acids and a 10 a.a. histidine-based tag for a total length of 199 a.a. and has a predicted molecular mass of 21.2 kDa. As a 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 0.005ng per μg of product (<>
Purity	Greater than 95% by SDS-PAGE gel analysis
Storage	The lyophilized protein, though stable at room temperature for few 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.
Reconstitution	Always centrifuge the vial before 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).

GENE INFORMATION

Gene Name	LIF leukemia inhibitory factor [Homo sapiens]
Official Symbol	Lif
Synonyms	LIF; leukemia inhibitory factor; CDF; cholinergic differentiation factor; DIA; differentiation inhibitory activity; differentiation inducing factor; hepatocyte stimulating factor III; HILDA; human interleukin in DA cells; D factor; melanoma-derived LPL inhibitor; differentiation-inducing factor; hepatocyte-stimulating factor III; differentiation-stimulating factor; MLPLI;
Gene ID	3976

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mRNA Refseq	NM_001257135
Protein Refseq	NP_001244064
MIM	159540
UniProt ID	P15018
Chromosome Location	22q12.2
Pathway	Adipogenesis, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Direct p53 effectors, 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; growth factor activity; leukemia inhibitory factor receptor binding; leukemia inhibitory factor receptor binding; receptor binding;

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