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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

LIF (human, recombinant)

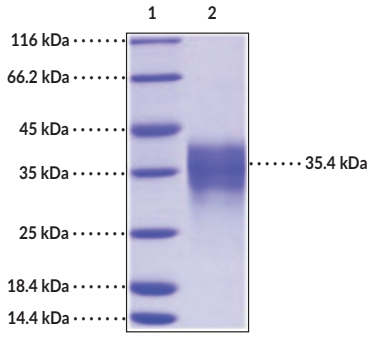
Item No. 32066

Overview and Properties

Synonyms:	Differentiation Inhibitory Factor, HILDA, Human Interleukin in DA Cells, Leukemia Inhibitor Factor, LIF Interleukin 6 Family Cytokine, Melanoma-derived LPL Inhibitor, MLPLI
Source:	Active recombinant human LIF expressed in HEK293 cells
Amino Acids:	23-202
Uniprot No.:	P15018
Molecular Weight:	19.7 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	<1.0 EU/µg, determined by the LAL endotoxin assay
Bioactivity:	See figures for details

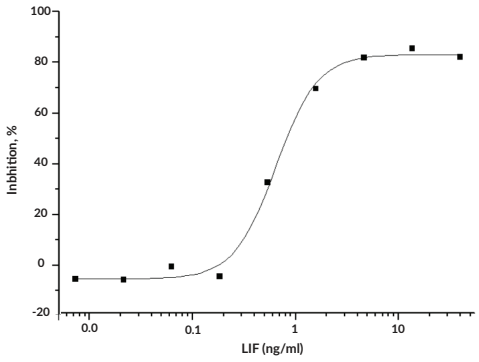
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image(s)



Lane 1: MW Markers
Lane 2: LIF

SDS-PAGE Analysis of LIF. This protein has a calculated molecular weight of 19.7 kDa. It has an apparent molecular weight of approximately 35.4 kDa by SDS-PAGE under reducing conditions due to glycosylation.



Ability of LIF to inhibit the proliferation of M1 mouse myeloid leukemia cells. Measured by its ability to inhibit the proliferation of M1 mouse myeloid leukemia cells. The ED_{50} for this effect is typically 0.2-0.8 ng/mL.

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PRODUCT INFORMATION

Description

Leukemia inhibitory factor (LIF) is a cytokine and member of the IL-6 family with roles in cell growth and differentiation, bone metabolism, and inflammation.[1] Mature LIF is a 180-amino acid peptide arranged as a four-helix bundle in an up-up-down-down configuration that is synthesized as a 202-amino acid precursor which is post-translationally processed to remove a 22-amino acid signaling sequence from its N-terminus. It is ubiquitously expressed and this expression is commonly upregulated under inflammatory conditions.[2] LIF binds to its receptor LIFRβ and recruits the IL-6 family common receptor gp130 to form a heterodimer and induce intracellular signaling *via* the JAK-STAT pathway.[1,3] Exogenous administration of LIF reduces the rate of deterioration in grip strength and slows progression of the forelimb deformity in the wobbler mouse model of amyotrophic lateral sclerosis (ALS).[4] Intracerebroventricular administration of a recombinant adeno-associated viral vector encoding LIF reduces food intake and body weight gain in rats.[5] Knockdown of *Lif* induces infertility in female mice.[1] Cayman's LIF (human, recombinant) protein can be used for cell-based assay applications. This protein consists of 180 amino acids, has a calculated molecular weight of 19.7 kDa, and a predicted N-terminus of Ser23 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 35.4 kDa due to glycosylation.

References

1. Nicola, N.A. and Babon, J.J. Leukemia inhibitory factor (LIF). *Cytokine Growth Factor Rev.* **26(5)**, 533-544 (2015).
2. Hisaka, T., Desmoulière, A., Taupin, J.-L., *et al.* Expression of leukemia inhibitory factor (LIF) and its receptor gp190 in human liver and in cultured human liver myofibroblasts. Cloning of new isoforms of LIF mRNA. *Comp. Hepatol.* **3(10)**, (2004).
3. Onishi, K. and Zandstra, P.W. LIF signaling in stem cells and development. *Development* **142(13)**, 2230-2236 (2015).
4. Kurek, J.B., Radford, A.J., Crump, D.E., *et al.* LIF (AM424), a promising growth factor for the treatment of ALS. *J. Neurol. Sci.* **160(Suppl. 1)**, S106-S113 (1998).
5. Pasquin, S., Sharma, M., and Gauchat, J.-F. Cytokines of the LIF/CNTF family and metabolism. *Cytokine* **82**, 122-124 (2016).

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