

Rev04
Update: Jan,19,2024

DATASHEET

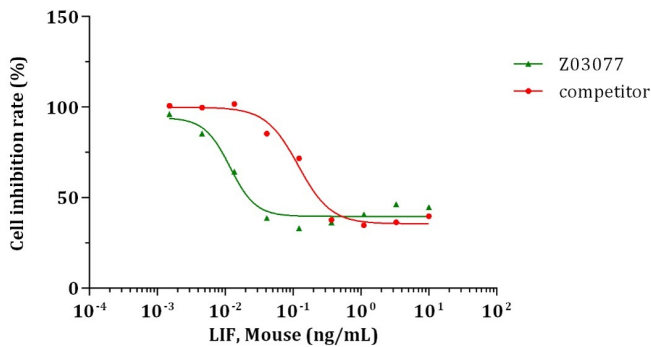
LIF, Mouse

Cat. No.: Z03077

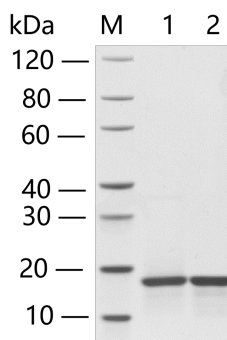
Product Introduction

Species	Mouse
Protein Construction	LIF (Ser24-Phe203) Accession # P09056
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	< 0.2 EU/μg of protein by gel clotting method
Biological Activity	ED ₅₀ < 0.01 ng/ml, measured by a cell differentiation assay using M1 cells, corresponding to a specific activity of > 1.0 × 10 ⁸ units/mg.
Expression System	E. coli
Apparent Molecular Weight	~19.9 kDa, on SDS-PAGE under reducing conditions.
Formulation	Lyophilized after extensive dialysis against 50 mM Tris, 150 mM NaCl, pH 8.0.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH ₂ O up to 100 μg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Examples



ED₅₀ < 0.01 ng/ml, measured by a cell differentiation assay using M1 cells, corresponding to a specific activity of > 1.0 × 10⁸ units/mg.



Lane 1: 2 µg of LIF, Mouse, reducing (R)
 Lane 2: 2 µg of LIF, Mouse, non-reducing (NR)
 > 95% as analyzed by SDS-PAGE

Background

Target Background : Leukemia Inhibitory Factor (LIF) is a pleiotropic cytokine belonging to the long four-helix bundle cytokine superfamily. LIF shares tertiary structure with several other cytokines, including Interleukin-6 (IL-6), Oncostatin M, ciliary neurotropic factor, and cardiotrophin-1, and their functions in vivo are also redundant to some extent. LIF can bind to the common receptor of IL-6 subfamily, gp130, and then recruit its own receptor LIF Receptor to form a ternary complex. The basal expression of LIF in vivo is low; and its expression is induced by pro-inflammatory factors, including lipopolysaccharide, IL-1, and IL-17, and inhibited by anti-inflammatory agents, including IL-4 and IL-13. The functions of LIF include proliferation of primordial germ cells, regulation in blastocyst implantation and early pregnancy, and maintenance of pluripotent embryonic stem cells.

Synonyms : D factor; CDF; HILDA; D-FACTOR; Differentiation- stimulating factor; Melanoma-derived LPL inhibitor; MLPLI; Emfilermin; Leukemia inhibitory factor; DIA

For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.

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