DATASHEET

Recombinant Rat Leukemia Inhibitory Factor

CAT. NO. ARP6635

KEY FEATURES

Target	Leukemia Inhibitory Factor	Source/Expression System	E.coli
Reactivity	Rat	Aapplication	SDS-PAGE
Abbreviation	rRtLIF	Synonyms	Differentiation-stimulating Factor, D factor, Melanoma-derived LPL Inhibitor, MLPLI

BACKGROUND

LIF, a member of Interleukin 6 family, is a pleiotropic factor produced by multiple cell types, including T cells, myelomonocytic lineages, fibroblasts, liver, heart and melanoma. LIF promotes long-term maintenance of embryonic stem cells by suppressing spontaneous differentiation. Other activities include the stimulation of acute phase protein synthesis by hepatocytes, stimulation of differentiation of cholinergic nerves, and suppression of adipogenesis by inhibiting the lipoprotein lipase in adipocytes. While human LIF is active on mouse cells and is widely used in the maintenance of murine ESC to prevent spontaneous differentiation, mouse LIF is not active on human cells due to its inability to bind to the human LIF receptor. Mature rat LIF shares 91% and 82% a.a. sequence identity with murine and human LIF, respectively. Recombinant Rat LIF is a 19.8kDa protein containing 180 amino acid residues, including three disulfide bonds.

PRODUCT OVERVIEW

Molecular Weight	Approximately 19.8 kDa, a single non-glycosylated polypeptide chain containing 180 amino acids.
Accession	P17777 Ser23-Phe202
A.A. Sequence	SPLPITPVNATCAIRHPCHGNLMNQIKNQLAQLNGSANALFISYYTAQGEPFPNNVEKLCAPNMTDFPSFHGNGTEKTKLVELYRMVAYLSASLTNITRDQKVLNPTAVSLQVKLNATIDVMRGLLSNVLCRLCNKYRVGHVDVPPVPDHSDKEAFQRKKLGCQLLGTYKQVISVVVQAF
Purity	＞98% by SDS-PAGE or HPLC.
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by the M1 cell differentiation assay is ≤0.05 ng/ml, corresponding to a specific activity of ≥ 2×10^7 units/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, with 150 mM NaCl, 0.02% (v/v) Tween-20, pH 7.4.
Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Endotoxin	< 0.01 EU/μg of rMuLIF protein as determined by LAL method.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

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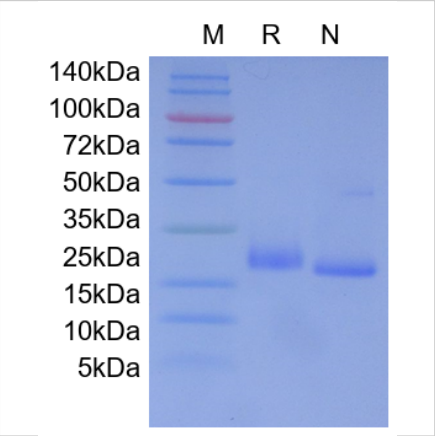
DATA



SDS-PAGE

STORAGE

For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reconstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.