DATASHEET

Recombinant Human Leukemia Inhibitory Factor

CAT. NO. ARP6767

KEY FEATURES

Target	Leukemia Inhibitory Factor	Source/Expression System	E.coli
Reactivity	Human	Aapplication	SDS-PAGE
Abbreviation	rHuLIF		

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 human LIF (180a.a.) shares 78 %, 82%, 91%, 88% and 87%a.a. sequence identity with mouse, rat, canine, bovine, and porcine LIF, respectively. Recombinant Human LIF is a 19.7kDa protein containing 180 amino acid residues, including three disulfide bonds.

PRODUCT OVERVIEW

Molecular Weight	Approximately 19.7 kDa, a single non-glycosylated polypeptide chain containing 180 amino acids.
Accession	P15018 Ser23-Phe202
A.A. Sequence	SPLPITPVNATCAIRHPCHNNLMNQIRSQLAQLNGSANALFILYYTAQGEPFPNNLDKLCGPNVTDFPPFHANGTEK AKLVELYRIVVYLGTSLGNITRDQKILNPSALSLHSKLNATADILRGLLSNVLCRLCSKYHVGHVDVTYGPDTSGKDVF QKKKLGCQLLGKYKQIIAVLAQAF
Purity	＞98% by SDS-PAGE or HPLC.
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by the dose-dependent proliferation of human TF-1 cells is less than 0.1 ng/ml, corresponding to a specific activity of ≥ 1.0×10^7 IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.2.
Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Endotoxin	< 0.1 EU/μg of rHuLIF 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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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.