Human LIF Protein

Catalog Number: 14890-HNAH

General Information

Gene Name Synonym:

CDF; DIA; HILDA; Leukemia Inhibitory Factor; MLPLI

Protein Construction:

A DNA sequence encoding the human LIF (P15018-1) (Met1-Phe202) was expressed.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

Bio Activity:

1.Measured by its ability to inhibit the proliferation of M1 mouse myeloid leukemia cells. The ED50 for this effect is typically 0.2-0.8 ng/mL.
2.Immobilized Recombinant Human LIF Protein (Cat: 14890-HNAH) at 2 μg/mL (100 μL/well) can bind Recombinant Human LIFR Protein (Fc Tag) (Cat: 10628-H02H), the EC50 is 7-21 ng/mL. (Routinely tested)

Endotoxin:

< 10 EU per mg protein.

Predicted N terminal: Ser 23

Molecular Mass:

The recombinant human LIF comprises 180 amino acids and has a predicted molecular mass of 19.7 kDa. The apparent molecular mass of the protein is approximately 23-43 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

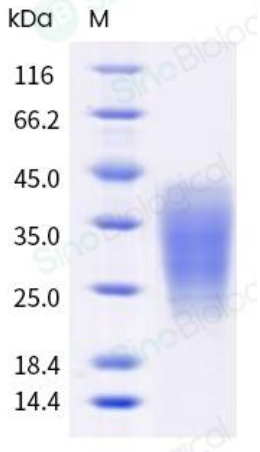
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Leukemia inhibitory factor (LIF) is a pleiotropic glycoprotein belonging to the IL-6 family of cytokines. It is involved in growth promotion and cell differentiation of different types of target cells, influence bone metabolism, cachexia, neural development, embryogenesis, and inflammation. LIF has potent proinflammatory properties, being the inducer of the acute phase protein synthesis and affecting cell recruitment into the area of damage or inflammation. LIF is also one of the cytokines that are capable to regulate the differentiation of embryonic stem cells, hematopoietic, and neuronal cells. LIF binds to the specific LIF receptor (LIFR-α) which forms a heterodimer with a specific subunit common to all members of that family of receptors, the GP130 signal-transducing subunit. This leads to the activation of the JAK/STAT and MAPK cascades. Due to its polyfunctional activities, LIF is involved in the pathogenic events and development of many diseases of various origins.

References

1.Salas EM, et al. (2011) LIF, a Novel STAT5-Regulated Gene, Is Aberrantly Expressed in Myeloproliferative Neoplasms. Genes Cancer. 2 (5): 593-6.
2.Chodorowska G, et al. (2004) Leukemia inhibitory factor (LIF) and its biological activity. Ann Univ Mariae Curie Sklodowska Med. 59 (2): 189-93.
3.Garcia-Campana AM, et al. (2007) LIF detection of peptides and proteins in CE. Electrophoresis. 28 (1-2): 208-32.