

Human LIF Protein (Fc Tag)

Catalog Number: 14890-H02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

LIF, HILDA

Protein Construction:

A DNA sequence encoding the human LIF (P15018)(Met1-Phe202) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its ability to inhibit the proliferation of M1 mouse myeloid leukemia cells. The ED50 for this effect is typically 0.6-3 ng/ml.
2. Measured by its ability to bind human LIFR-His (Cat:10628-H08H) in a functional ELISA.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 23

Molecular Mass:

The recombinant human LIF/Fc is a disulfide-linked homodimer. The reduced monomer comprises 421 amino acids and has a predicted molecular mass of 46.7 kDa. The apparent molecular mass of the protein is approximately 63 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

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

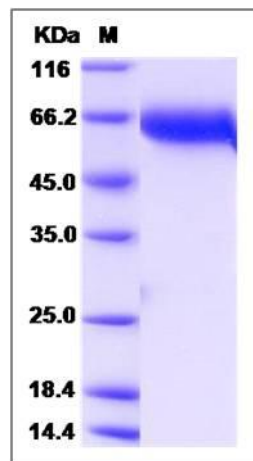
Usage Guide

Storage:

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

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Leukemia inhibitory factor (LIF) is a pleiotropic glycoprotein belonging to the IL-6 family of cytokines. It shows a wide range of biologic activities that include the growth promotion and cell differentiation of different types of target cells, influence on bone metabolism, cachexia, neural development, embryogenesis and inflammation. LIF has potent proinflammatory property, being the inducer of the acute phase protein synthesis and affecting the 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. Due to its polyfunctional activities, LIF is involved in the pathogenic events and development of many diseases of various origin. 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 activation of the JAK/STAT and MAPK cascades. LIF is considered as a direct transcriptional target of STAT5 in myeloid cell lines: STAT5 binds to LIF promoter, and LIF expression is increased after activation of the JAK2/STAT5 pathway. LIF expression is significantly increased in patients with chronic myeloproliferative neoplasms with and without activating mutations of the pathway, indicating that LIF might play an important role in STAT5-mediated oncogenesis.

References

1. Salas EM. et al. (2011) Genes Cancer. 2 (5): 593-6.
2. Chodorowska G. et al. (2004) Ann Univ Mariae Curie Skłodowska Med. 59 (2): 189-93.
3. García-Campaa AM. et al. (2007) Electrophoresis. 28 (1-2): 208-32.

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