
Human LIF Recombinant Protein Purified

Catalog Number: 14-8460

Also known as: Leukemia Inhibitory Factor, HILDA

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Human LIF Recombinant Protein Purified



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Concentration: 0.1 mg/mL

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment.

Source: E. coli expressed amino acids Ser23-Phe202, accession number NM_002309

Molecular Mass: 6.4 kDa

Purity: > 97%, as determined by SDS-PAGE.

Endotoxin: Less than 0.01 ng/ug cytokine, as determined by the LAL assay.

Bioactivity: The ED50 of this protein, as measured by mouse IL-6 induction in M1 cells, is less than or equal to 15 ng/mL. This corresponds to a specific activity of greater than or equal to 6.7 x 10⁴ Units/mg.

Formulation: Sterile liquid: 0.1 M glycine, 1% BSA, pH 3.0

Temperature Limitation: Store at less than or equal to -70°C.

Batch Code: Refer to vial

Use By: Refer to vial



Description

Leukemia inhibitory factor (LIF) is a 20 kDa protein that belongs to the IL-6 receptor family. It binds to a heterodimeric membrane receptor made up of a LIF-specific subunit, gp190 or LIFR, and the subunit gp130, which is shared with the other members of the IL-6 family. LIF expression has been observed in various tissues including thymus, lung, and neuronal tissue. LIF displays diverse biological effects, but is best known for its ability to inhibit the differentiation of embryonic stem cells in mice, and contribute to stem cell self-renewal. LIF can be up-regulated by pro-inflammatory cytokines such as TNF alpha and IL-17, and elevated levels of LIF have been found in cases of rheumatoid arthritis, neural injury, systemic inflammation, and tuberculosis. Human and mouse LIF share 79% sequence homology and exhibit cross-species activity. However, LIF inhibition of stem cell differentiation appears to be mouse-specific.

Applications Reported

Human LIF Recombinant Protein is biologically active.

Applications Tested

The ED50 of this protein, as measured by mouse IL-6 induction in M1 cells, is less than or equal to 15 ng/mL. This corresponds to a specific activity of greater than or equal to 6.7 x 10⁴ Units/mg.

References

Mullen EM, Gu P, Cooney AJ. Nuclear receptors in regulation of mouse ES pluripotency and differentiation. PPAR Res. 2007;2007:61563

Metcalf D. The unsolved enigmas of leukemia inhibitory factor. Stem Cells. 2003;21(1):5-14

Gadient RA, Patterson PH. Leukemia inhibitory factor, interleukin 6, and other cytokines using the GP130 transducing receptor: roles in inflammation and injury. Stem Cells. 1999;17(3):127-137

Related Products

14-8521 Mouse LIF Recombinant Protein

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