

TECHNICAL DATA SHEET

Recombinant Human LIF (Carrier-free)

Catalog Number: 21-8460

RPx-Pro™ Recombinant Protein
PRODUCT INFORMATION

CONTENTS

Recombinant Human LIF (Carrier-free)

DESCRIPTION

Leukemia Inhibitory Factor (LIF) is a member of the IL-6 family of cytokines, based on its helical structure. LIF expression has been observed in various tissues including thymus, lung, and neuronal tissue. Expression has also been reported in T cells, monocytes, astrocytes, osteoblasts, keratinocytes, regenerating skeletal muscle, mast cells, and fibroblasts. LIF promotes long-term maintenance of embryonic stem cells by suppressing spontaneous differentiation, however inhibition appears to be mouse specific. LIF can be upregulated by proinflammatory cytokines such as IL-17 and TNF-alpha. It has also been reported to promote regulatory T cell and inhibit Th17 cell differentiation.

MOLECULAR MASS

Recombinant human LIF is a 19.6 kDa protein containing 180 amino acids residues including three disulfide bonds.

AMINO ACID SEQUENCE

SPLPITPVNA TCAIRHPCHN NLMNQIRSQL AQLNGSANAL FILYYTAQGE PFPNNLDKLC GPNVTDFFPF HANGTEKAKL VELYRIVVYL GTSLGNITRD QKILNPSALS LHSKLNATAD ILRGLLSNVL CRLCSKYHVG HVDVTYGPD TSGKDV FQKKK LGCQLLGKYK QIIAVLAQAF

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/μg of protein (<1 EU/μg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Mouse

BIOACTIVITY

Determined by its ability to stimulate the proliferation of human TF-1 cells. The expected ED₅₀ is ≤ 0.1 ng/ml, corresponding to a specific activity of ≥ 1 x 10⁷ units/mg.

RESEARCH AREAS

Diabetes / Weight Regulation; Immune System; Lipid Metabolism; Proliferation; Stem Cells & Differentiation

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Trouillas M, Saucourt C, Guillotin B, Gauthereau X, Taupin JL, Moreau JF and Boeuf H. 2009. Eur Cytokine Netw. 20(2): 51-62. Gough NM, Gearing DP, King JA, Willson TA, Hilton DJ, Nicola NA and Metcalf D. 1988. Proc Natl Acad Sci USA. 85(8): 2623-2627. Moreau JF, Donaldson DD, Bennett F, Witek-Giannotti J, Clark SC and Wong GG. 1988. Nature. 336(6200): 690-692.

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