



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human KLF5 Protein
Catalog Number: hTF-1053
Manufacturer: LD Biopharma, Inc.

Introduction

Human KLF5, also known as intestine enriched kru'ppel-like factor or IKLF) is a zinc finger containing transcription factor that belongs to a group of proteins known as the Sp/KLF factor family. KLF5 interacts with many other transcription factors, including c-Jun, retinoic acid receptor- α (RAR α), CREB-binding protein (CBP) and PPAR- δ and regulates the expression of many genes involved in cell proliferation, differentiation, angiogenesis and carcinogenesis. In the vasculature, KLF5 is an important regulatory factor of phenotypic modulation of vascular muscle cells (VSMC), which may be involved in the development of atherosclerosis.

Full-length human KLF5 cDNA (457aa, derived from BC042131) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

Gene Symbol: KLF5 (BTEB2; CKLF; IKLF)
Accession Number: NP_001721.2
Species: Human
Size: 20 μ g / Vial
Composition: 0.20 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

Key References

Shi,H.J., et al., *KLF5 and hhLIM cooperatively promote proliferation of vascular smooth*



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muscle cells. Mol. Cell. Biochem. 367 (1-2), 185-194 (2012)

Li,H., et al., *Clinicopathological correlation of Kruppel-like factor 5 and matrix metalloproteinase-9 expression and cartilage degeneration in human osteoarthritis*. Pathol. Res. Pract. 208 (1), 9-14 (2012)

Diakiw,S.M., et al., *The granulocyte-associated transcription factor Kruppel-like factor 5 is silenced by hypermethylation in acute myeloid leukemia*. Leuk. Res. 36 (1), 110-116 (2012)

Applications

1. May be used for in vitro KLF5 mediated gene transcription regulation study for cell proliferation, differentiation, angiogenesis and carcinogenesis with “ProFectin” reagent based intracellular delivery of this protein.
2. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. May be used for protein-protein interaction mapping.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFATRVLSSARLGPVPQPPAPQDEPVFAQLKPVLGA
ANPARDAALFPGEELKHAHRPQAQAPAPAQAPQPAQPPATGPRLPPEDLVQTRCEMEKYLTPQL
PPVPIIPEHKKYRRDSASVVDQFFTDTEGLPYSINMNVFLPDI THLRTGLYKSRPCVTHIKTE
PVAIFSHQSETTAPPPAPTQALPEFTSIFSSHQTAAPVNNIFIKQELPTPDLHLSVPTQQGHL
YQLLNTPDLDMPSSTNQTAAMDTLNVSMSAAMAGLNTHTS AVPQTAVKQFQGMPPCTYTMPSQF
LPQQATYFPPSPPSSEPGSPDRQAEMLQNLTPPPSYAATIASKLAIHNPNLPTTLPVNSQNIQP
VRYNRRSNPDLEKRIHYCDYPGCTKVYTKSSHLKAHLRTHTGEPYKCTWEGCDWRWFARSDDEL
TRHYRKHTGAKPFQCGVCNRSFSRSDHLALHMKRHQN