



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human IRF3 Protein
Catalog Number: hTF-1613
Manufacturer: LD Biopharma, Inc.

Introduction

Human interferon regulatory factor 3 (IRF3) gene encodes a member of the interferon regulatory transcription factor (IRF) family. The encoded protein is found in an inactive cytoplasmic form that upon serine/threonine phosphorylation forms a complex with CREBBP. This complex translocates to the nucleus and activates the transcription of interferons alpha and beta, as well as other interferon-induced genes. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene.

Full-length human IRF3 (426aa , Isoform-1) gene was constructed with 29 aa N-terminal T7 / His / TEV cleavage site Tag and expressed in E.coli as inclusion bodies. It was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: IRF3 (NIB1805)
Accession Number: NP_001562.1
Species: Human
Size: 50 µg / Vial
Composition: 0.50 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

Roy S, et al., *CD14 mediates Toll-like receptor 4 (TLR4) endocytosis and spleen tyrosine kinase (Syk) and interferon regulatory transcription factor 3 (IRF3) activation in epithelial cells and impairs neutrophil infiltration and Pseudomonas aeruginosa killing in vivo.* J. Biol. Chem.



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289 (2), 1174-1182 (2014)

Schmid S, et al., *Mitogen-activated protein kinase-mediated licensing of interferon regulatory factor 3/7 reinforces the cell response to virus*. J. Biol. Chem. 289 (1), 299-311 (2014)

Lee HC, et al., *Transcriptional regulation of IFN-lambda genes in hepatitis C virus-infected hepatocytes via IRF-3.IRF-7.NF-kappaB complex*. J. Biol. Chem. 289 (8), 5310-5319 (2014)

Applications

1. May be used for in vitro IRF3 mediated gene transcription regulation study for interferon a and b production 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 IRF3 protein-protein interaction mapping.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGEFGTPKPRILPWLVSQDLGQLEGVAWVNKSRTRFRIP
WKHGLRQDAQQEDFGIFQAWAEATGAYVPGRDKPDLPTWKRNFRSALNRKEGLRLAEDRSKDPH
DPHKIYEFVNSGVGDFSQPDTSPTDNGGGSTSDTQEDILDELLGNMVLAPLPDPGPPSLAVAPE
PCPQPLRSPSLDNPTFPNLGPOSENPLKRLLVPGEEWEFEVTAFYRGRQVFQQTISCPEGLRLV
GSEVGDRTPGWPVTLDPGMSLTDGVMYSYVRHVLSCGGGLALWRAGQWLWAQRLGHCHTYW
AVSEELLPNSGHGPDGEVPKDKEGGVFDLGPFIVDLITFTEGSGRSPRYALWFCVGESWPQDQP
WTKRLVMVKVVP TCLRALVEMARVGGASSLENTVDLHISNSHPLSLTSDQYKAYLQDLVEGMDF
QGPGES