



**LD Biopharma, Inc.**  
9924 Mesa Rim Road, Suite B  
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Tel: 858-876-8266  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human IRF4 Protein  
**Catalog Number:** hTF-1631  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

The protein encoded by human interferon regulatory factor 4 (IRF4) gene belongs to the IRF (interferon regulatory factor) family of transcription factors, characterized by a unique tryptophan pentad repeat DNA-binding domain. The IRFs are important in the regulation of interferons in response to infection by virus, and in the regulation of interferon-inducible genes. This family member is lymphocyte specific and negatively regulates Toll-like-receptor (TLR) signaling that is central to the activation of innate and adaptive immune systems. A chromosomal translocation involving this gene and the IgH locus, t(6;14)(p25;q32), may be a cause of multiple myeloma. Alternatively spliced transcript variants have been found for this gene.

Full-length human IRF4 (450 aa, derived from BC015752) gene was constructed with 29 aa N-terminal T7 / His / TEV cleavage site Tag and 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:** IRF4 (LSIRF; MUM1; NF-EM5; SHEP8)  
**Accession Number:** NP\_002451  
**Species:** Human  
**Size:** 25 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

Kong X, et al., *IRF4 is a key thermogenic transcriptional partner of PGC-1alpha*. Cell



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158 (1), 69-83 (2014)

Forero A, et al., *Downregulation of IRF4 induces lytic reactivation of KSHV in primary effusion lymphoma cells*. *Virology* 458-459, 4-10 (2014)

Praetorius C, et al., *A polymorphism in IRF4 affects human pigmentation through a tyrosinase-dependent MITF/TFAP2A pathway*. *Cell* 155 (5), 1022-1033 (2013)

## Applications

1. May be used for in vitro IRF4 mediated gene transcription regulation for brown fat cell and macrophage interferon pathway study 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 IRF4 protein-protein interaction mapping.
4. As immunogen for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFNLEGGGRGGEFGMSAVSCGNGKLRQWLIDQIDSGK  
YPGLVWENEKSI FRIPWKHAGKQDYNREEDAALFKAWALFKGKFREGIDKPDPTWKTRLRCA  
LNKSNDFEELVERSQLDISDPYKVYRIVPEGAKKGAKQLTLEDPQMSMHPYTMTPYPSLPAQ  
QVHNYMMPPLDRSWRDYVPDQPHPEIPYQCPMTFGPRGHHWQGPACENGCVTGTFTYACAPPES  
QAPGVPTEPSIRSAAEALAFSDCRLHICLYYREILVKELTTSSPEGCRISHGHTYDASNLDQVLF  
PYPEDNGQRKNI EKLLSHLERGVVLWMAPDGLYAKRLCQSRIYWDGPLALCNDRPNKLERDQTC  
KLFDTQQFLSELQAFHHGRSLPRFQVTLFCGEEFPDPQRQRKLITAHVEPLLARQLYYFAQQN  
SGHFLRGYDLPEHISNPEDYHRSIRHSSIQE