



**LD Biopharma, Inc.**  
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<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human IRF5-11R Protein  
**Catalog Number:** hTF-2392  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human interferon regulatory factor 5 (IRF5) gene encodes a member of the interferon regulatory factor (IRF) family, a group of transcription factors with diverse roles, including virus-mediated activation of interferon, and modulation of cell growth, differentiation, apoptosis, and immune system activity. Members of the IRF family are characterized by a conserved N-terminal DNA-binding domain containing tryptophan (W) repeats. Alternative promoter use and at least 6 alternative splicing result in at least 6 isoform variants, and a 30-nt indel polymorphism (SNP rs60344245) can result in loss of a 10-aa segment.

Full-length human IRF5 cDNA (497aa, Isoform-I) was constructed with codon optimization using gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal and 11 arginine (11R) tag at its C-terminal. It was 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:** IRF5 (SLEB10)  
**Accession Number:** NP\_116032  
**Species:** Human  
**Size:** 10 µg / Vial  
**Composition:** 0.1 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Arginine and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Cushing L, et al., *IRAK4 kinase activity controls Toll-like receptor-induced inflammation through the transcription factor IRF5 in primary human monocytes* J. Biol. Chem. 292 (45), 18689-18698 (2017)



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Cai H, et al., *IRF-5 accelerates leukocyte adhesion to endothelial cells in ischemia-reperfusion injury through regulating the transcription of VCAM-1*. *Biochem. Biophys. Res. Commun.* 492 (2), 192-198 (2017)

Zervou MI, et al., *Association of IRF5 polymorphisms with increased risk for systemic lupus erythematosus in population of Crete, a southern-eastern European Greek island*. *Gene* 610, 9-14 (2017)

Barnes BJ, et al., *Multiple regulatory domains of IRF-5 control activation, cellular localization, and induction of chemokines that mediate recruitment of T lymphocytes*. *Mol. Cell. Biol.* 22 (16), 5721-5740 (2002)

## Applications

1. May be used for in vitro IRF5 mediated gene transcription regulation study in cell growth, differentiation, apoptosis, and immune system pathway for various cells by intracellular delivery of this protein.
2. May be used for mapping protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential biomarker/therapeutic protein for inflammation related diseases drug development.
5. As immunogen for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFNQSI PVAPT PPRRVRLKPWLVAQVNSCQYPGLQWV  
NGEKKLF CIPWRHATR HGPSQDGDNTIFKAWAKETGKYTEGVDEADPAKWKANLRCALNKSRDF  
RLIYDGP RDMPPQPYKIYEVC SNGPAPTDSQPPEDYSFGAGEEEEEEEEEELQRMLPSLSLTEDVK  
WPPTLQPP TLRPPTLQPP TLPVVLGPPAPDPSPLAPP GNPAGFRELLSEVLEPGPLPASLP  
PAGEQLLPDLLISP HMLPLTDLEIKFQYRGRPPRALTISNPHGCRLFYSQL EATQE QVELFGPI  
SLEQVRFPS PEDIPSDKQRFYTNQLLDVLD RGLILQLQGQDLYAIRLCQCKVFWSGPCASAHDS  
CPNPIQREV KTKLFLSLEHFLNELILFQKGQTNT PPF EIFFCFGE EWPDRKPREKKLITVQVVP  
VAARLLLEMFSGELSWSADSIRLQISNPDLKDRMVEQFKELHHIWQSQQRLQPVAQAPPGAGLG  
VGQGPWPMHPAGMQESGGGGSPGRRRRRRRRRRR