



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant YFP-Human **IRF8**-11R Protein
Catalog Number: HTF-2939
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human Interferon regulatory factor 8 (IRF8) gene encodes a protein, which plays a role as a transcriptional activator or repressor. It specifically binds to the upstream regulatory region of type I IFN and IFN-inducible MHC class I genes (the interferon consensus sequence (ICS)). IRF8 also plays a negative regulatory role in cells of the immune system. It is involved in CD8⁺ dendritic cell differentiation by forming a complex with the BATF-JUNB heterodimer in immune cells, leading to recognition of AICE sequence (5'-TGAnTCA/GAAA-3'), an immune-specific regulatory element, followed by cooperative binding of BATF and IRF8 and activation of genes.

Full-length human IRF8 cDNA (426aa, derived from BC126247) was constructed with codon optimization gene synthesis and expressed with YFP Protein as N-terminal (YFP; 256aa) and 11 arginine (11R tag) at C-terminal 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: IRF8 (H-ICSBP; ICSBP1)
Accession Number: NP_002154.1
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References

Parnell GP, et al., *The latitude-dependent autoimmune disease risk genes ZMIZ1 and IRF8 regulate mononuclear phagocytic cell differentiation in response to vitamin D*. Hum. Mol. Genet. 28 (2), 269-278 (2019)



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Gaillard C, et al., *Identification of IRF8 as a potent tumor suppressor in murine acute promyelocytic leukemia*. Blood Adv 2 (19), 2462-2466 (2018)

Zhang Y, et al., *Altered expression of transcription factors IRF4 and IRF8 in peripheral blood B cells is associated with clinical severity and circulating plasma cells frequency in patients with myasthenia gravis*. Autoimmunity 51 (3), 126-134 (2018)

Ye L, et al., *Interferon Consensus Sequence-Binding Protein 8, a Tumor Suppressor, Suppresses Tumor Growth and Invasion of Non-Small Cell Lung Cancer by Interacting with the Wnt/beta-Catenin Pathway*. Cell. Physiol. Biochem. 51 (2), 961-978 (2018)

Applications

1. May be used for in vitro IRF8 mediated gene transcription regulation study for various cells by directly intracellular delivery of this recombinant IRF8-11R protein simply adding this protein reagent into culture medium.
2. May be used for mapping IRF8 protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human IRF8 immunogen for its specific antibody production.

Quality Control

Purity: > 90 % by SDS-PAGE.

Recombinant **YFP**- Human IRF8-11R Fusion Protein Sequence (79.8 kD)

MKHHHHHHQVSKGEEELFTGVVPIILVELDGDVNGHKFSVSGEGEGDATYGKLTLLKLLCTTGKLPVPWPTLV
TTLGYGVQCFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEEDTLVNRIELKIDFK
EDGNILGHKLEYNYNSHNVYITADKQKNGIKANFKIRHNIEDGGVQLADHYQQNTPIGDGPVLLPDNHYL
SYQSALFKDPNEKRDHMLLEFLTAAGITEGMNDLYKGS**ENLYFQGE**FCDRNGGRRLRQWLIEQIDSSMY
PGLIWENEKSMFRIPWKHAGKQDYNQEVDAIFKAWAVFKGKFKEGDKAEPATWKTRLRALNKSDFE
EVTDRSQLDISEPYKVYRIVPEEEQKCKLGVATAGCVNEVTEMECGRSEIDELIKEPSVDDYMGMIKRSP
SPPEACRSQLLPDWQAQPPSTGVPLVTGYTTYDAHHSAFSQMVISFYGGKLVGQATTTCPGECRLSLSQ
PGLPGTKLYGPEGLELVRFPADAIIPSERQRQVTRKLFGLHLERGVLLHSSRQGVFVKRLCQGRVFCSGNA
VVCKGRPNKLERDEVVQVFDTSQFFRELQQFYNSQGRLPDGRVVLFCGEEFPDMAPLRSKLILVQIEQLY
VRQLAEEAGKSCGAGSVMQAPPEPPPDQVFRMFPDICASHQRSFFRENQQITV**ESGGGSPGRRRRRRR**
RRR