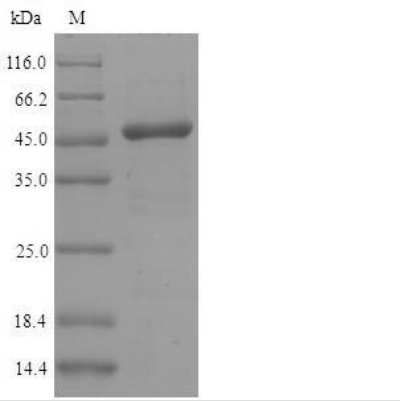
Recombinant Mouse Interferon regulatory factor 3 (Irf3)

Product Code	CSB-YP011818MO
Relevance	Key transcriptional regulator of type I interferon (IFN)-dependent immune responses which plays a critical role in the innate immune response against DNA and RNA viruses. Regulates the transcription of type I IFN genes (IFN-alpha and IFN-beta) and IFN-stimulated genes (ISG) by binding to an interferon-stimulated response element (ISRE) in their promoters. Acts as a more potent activator of the IFN-beta (IFNB) gene than the IFN-alpha (IFNA) gene and plays a critical role in both the early and late phases of the IFNA/B gene induction. Found in an inactive form in the cytoplasm of uninfected cells and following viral infection, double-stranded RNA (dsRNA), or toll-like receptor (TLR) signaling, is phosphorylated by IKBKE and TBK1 kinases. This induces a conformational change, leading to its dimerization and nuclear localization and association with CREB binding protein (CREBBP) to form dsRNA-activated factor 1 (DRAF1), a complex which activates the transcription of the type I IFN and ISG genes. Can activate distinct gene expression programs in macrophages and can induce significant apoptosis in primary macrophages.
Abbreviation	Recombinant Mouse Irf3 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P70671
Alias	Short name:IRF-3
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	METPKPRILPWLVSQLDLGQLEGVAWLDESRTRFRIPWKHGLRQDAQMADFG IFQAWAEASGAYTPGKDKPDVSTWKRNFRSALNRKEVLRLAADNSKDPYDPH KVYEFVTPGARDFVHLGASPDTNGKSSLPHSQENLPKLFDGLILGPLKDEGSS DLAIVSDPSQQLPSPNVNNFLNPAPQENPLKQLLAEEQWEFEVTAFYRGRQVF QQTLFCPGGLRLVGSTADMTLPWQPVTLPDPEGFLTDKLVKEYVGQVLKGLG NGLALWQAGQCLWAQRLGHSHAFWALGEELLPDSGRGPDGEVHKDKDGAV FDLRPFVADLIAFMEGSGHSPRYTLWFCMGEMWPQDQPWVKRLVMVKVVPT CLKELLEMAREGGASSLKTVDLHISNSQPISLTSDQYKAYLQDLVEDMDFQAT GNI
Research Area	Immunology
Source	Yeast
Target Names	Irf3

Protein Names	Recommended name: Interferon regulatory factor 3 Short name= IRF-3
Expression Region	1-419aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	50.9kDa
Protein Length	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

CUSABIO transfected the expression vector which inserted the recombinant DNA into the yeast, cultured the cells, and then induced the transcription and translation of the cloned vector. The N-terminal 10xHis tag and C-terminal Myc tag sequence was appended to the gene coding for the yeast of the mouse Irf3 protein to form the recombinant DNA. The recombinant mouse Irf3 was expressed as N-terminal 10xHis-tagged and C-terminal Myc-tagged fusion. The purity of the protein is greater than 90% assayed by SDS-PAGE. It has an apparent molecular weight of approximately 50 kDa.

IFN regulatory factor-3 (IRF-3) is a transcription factor that plays a central role in the host IRF-3 regulates genes in the innate immune response. As a key regulator, IRF-3 influence the IFN-α/β gene expression. IRF-3 activation and, as a consequence, IFN-β mRNA induction are inhibited in wild-type (PR8) influenza virus-infected cells but not in cells infected with an isogenic virus lacking the NS1 gene. Studies found that positiveregulationofinterferon regulatory factor 3activation by Herc5 via ISG15 modification. In addition, ubiquitously expressed IRF-3 is directly activated after virus infection and functions as a key activator of the immediate-early alpha/beta interferon (IFN) genes, as well as the RANTES chemokine gene.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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