

KD-Validated Anti-Interferon Regulatory Factor 3 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1089**Specification****KD-Validated Anti-Interferon Regulatory Factor 3 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	Q14653
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 47 kDa, observed, 57 kDa KDa
Gene Name	IRF3
Aliases	IRF3; Interferon Regulatory Factor 3; IIAE7; IRF-3
Immunogen	A synthesized peptide derived from human IRF3

KD-Validated Anti-Interferon Regulatory Factor 3 Rabbit Monoclonal Antibody - Additional Information**Gene ID** 3661**Other Names**

Interferon regulatory factor 3, IRF-3, IRF3 {ECO:0000303|PubMed:9803267, ECO:0000312|HGNC:HGNC:6118}

KD-Validated Anti-Interferon Regulatory Factor 3 Rabbit Monoclonal Antibody - Protein Information

Name IRF3 {ECO:0000303|PubMed:9803267, ECO:0000312|HGNC:HGNC:6118}

Function

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 (PubMed:22394562, PubMed:24049179, PubMed:25636800, PubMed:27302953, PubMed:31340999, PubMed:36603579, PubMed:8524823). 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 (PubMed:11846977, PubMed:16846591, PubMed:16979567, PubMed:20049431, PubMed:21340999, PubMed:22394562, PubMed:24049179, PubMed:25636800, PubMed:27302953, PubMed:31340999, PubMed:36603579, PubMed:8524823).

href="http://www.uniprot.org/citations/32972995" target="_blank">>32972995, PubMed:>36603579, PubMed:>8524823). 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 (PubMed:>16846591, PubMed:>16979567, PubMed:>20049431, PubMed:>36603579). 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 (PubMed:>22394562, PubMed:>25636800, PubMed:>27302953, PubMed:>36603579). 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 (PubMed:>16154084, PubMed:>27302953, PubMed:>33440148, PubMed:>36603579). Can activate distinct gene expression programs in macrophages and can induce significant apoptosis in primary macrophages (PubMed:>16846591). In response to Sendai virus infection, is recruited by TOMM70:HSP90AA1 to mitochondrion and forms an apoptosis complex TOMM70:HSP90AA1:IRF3:BAX inducing apoptosis (PubMed:>25609812). Key transcription factor regulating the IFN response during SARS-CoV-2 infection (PubMed:>33440148).

Cellular Location

Cytoplasm. Nucleus Mitochondrion. Note=Shuttles between cytoplasmic and nuclear compartments, with export being the prevailing effect (PubMed:10805757, PubMed:35922005). When activated, IRF3 interaction with CREBBP prevents its export to the cytoplasm (PubMed:10805757). Recruited to mitochondria via TOMM70:HSP90AA1 upon Sendai virus infection (PubMed:25609812).

Tissue Location

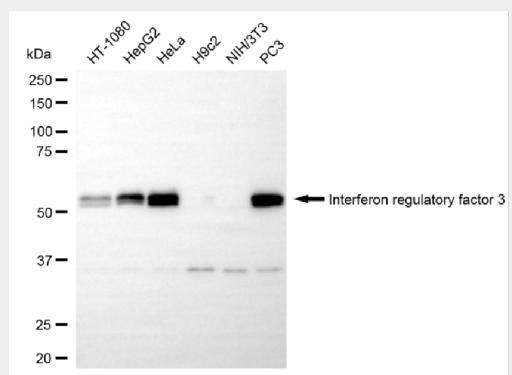
Expressed constitutively in a variety of tissues.

KD-Validated Anti-Interferon Regulatory Factor 3 Rabbit Monoclonal Antibody - Protocols

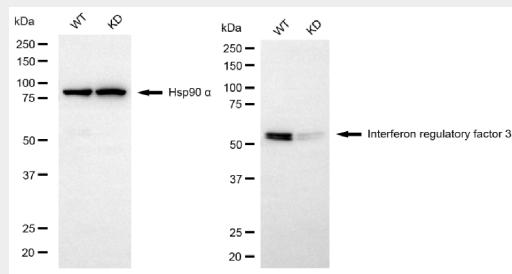
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

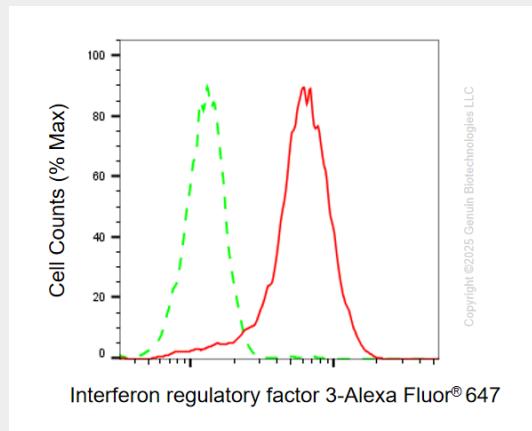
KD-Validated Anti-Interferon Regulatory Factor 3 Rabbit Monoclonal Antibody - Images


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Western blotting analysis using anti-Interferon regulatory factor 3 antibody (Cat#AGI1089). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Interferon regulatory factor 3 antibody (Cat#AGI1089, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.


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Western blotting analysis using anti-interferon regulatory factor 3 antibody (Cat#AGI1089). Interferon regulatory factor 3 expression in wild type (WT) and interferon regulatory factor 3 (IRF3) knockdown (KD) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-interferon regulatory factor 3 antibody (Cat#AGI1089, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.


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Flow cytometric analysis of Interferon regulatory factor 3 expression in HepG2 cells using anti-Interferon regulatory factor 3 antibody (Cat# AGI1089, 1:2,000). Green, isotype control; red, Interferon regulatory factor 3.