

IRF3 Polyclonal Antibody
Catalog # AP74034

Specification

IRF3 Polyclonal Antibody - Product Information

Application	IHC-P
Primary Accession	Q14653
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

IRF3 Polyclonal Antibody - Additional Information

Gene ID 3661

Other Names

Interferon regulatory factor 3 (IRF-3)

Dilution

IHC-P~~N/A

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

IRF3 Polyclonal 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:[32972995](#), PubMed:

[36603579](http://www.uniprot.org/citations/36603579), PubMed: [8524823](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/16846591), PubMed: [16979567](http://www.uniprot.org/citations/16979567), PubMed: [20049431](http://www.uniprot.org/citations/20049431), PubMed: [36603579](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/22394562), PubMed: [25636800](http://www.uniprot.org/citations/25636800), PubMed: [27302953](http://www.uniprot.org/citations/27302953), PubMed: [36603579](http://www.uniprot.org/citations/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 (DRAFI), a complex which activates the transcription of the type I IFN and ISG genes (PubMed: [16154084](http://www.uniprot.org/citations/16154084), PubMed: [27302953](http://www.uniprot.org/citations/27302953), PubMed: [33440148](http://www.uniprot.org/citations/33440148), PubMed: [36603579](http://www.uniprot.org/citations/36603579)). Can activate distinct gene expression programs in macrophages and can induce significant apoptosis in primary macrophages (PubMed: [16846591](http://www.uniprot.org/citations/16846591) target="_blank">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](http://www.uniprot.org/citations/25609812) target="_blank">25609812). Key transcription factor regulating the IFN response during SARS-CoV-2 infection (PubMed: [33440148](http://www.uniprot.org/citations/33440148) target="_blank">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

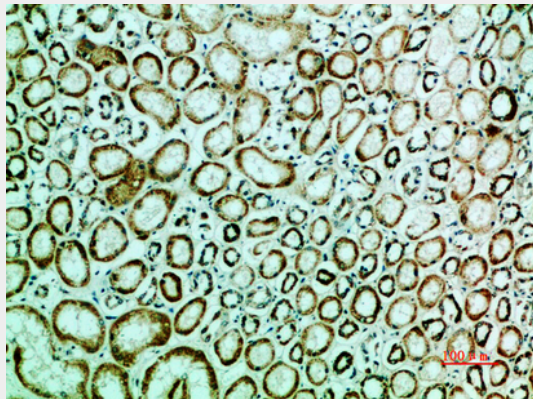
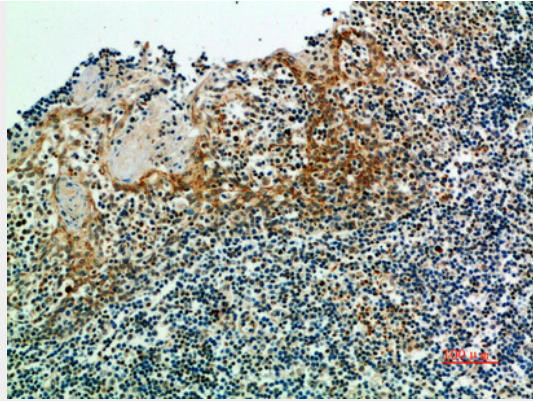
Expressed constitutively in a variety of tissues.

IRF3 Polyclonal 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](#)

IRF3 Polyclonal Antibody - Images



IRF3 Polyclonal Antibody - Background

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 IKKε 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.