

# IRF3 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)  
Catalog # AP21782a

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">Q14653</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB53950
<b>Calculated MW</b>	47219

## Additional Information

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<b>Gene ID</b>	3661
<b>Other Names</b>	Interferon regulatory factor 3, IRF-3, IRF3
<b>Target/Specificity</b>	This IRF3 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 78-108 amino acids from human IRF3.
<b>Dilution</b>	WB~~1:2000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	IRF3 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	IRF3 {ECO:0000303   PubMed:9803267, ECO:0000312   HGNC:HGNC:6118}
<b>Function</b>	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: <a href="#">22394562</a> , PubMed: <a href="#">24049179</a> , PubMed: <a href="#">25636800</a> , PubMed: <a href="#">27302953</a> , PubMed: <a href="#">31340999</a> , PubMed: <a href="#">36603579</a> , PubMed: <a href="#">8524823</a> , PubMed: <a href="#">39362857</a> ). 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](#), 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](#)).

<b>Cellular Location</b>	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).
<b>Tissue Location</b>	Expressed constitutively in a variety of tissues.

## Background

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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.

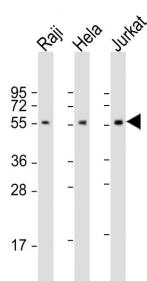
## References

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Au W.W.-C.,et al.Proc. Natl. Acad. Sci. U.S.A. 92:11657-11661(1995).  
Tabata Y.,et al.Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Grimwood J.,et al.Nature 428:529-535(2004).  
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

## Images

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All lanes : Anti-IRF3 Antibody (N-Term) at 1:2000 dilution  
Lane 1: Raji whole cell lysate Lane 2: HeLa whole cell lysate Lane 3: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 47 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.