

**Anti-IRF3 Antibody**  
**Catalog # ABO11127****Specification**

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**Anti-IRF3 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q14653</a>
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Interferon regulatory factor 3(IRF3) detection. Tested with WB in Human.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-IRF3 Antibody - Additional Information**

**Gene ID** 3661

**Other Names**

Interferon regulatory factor 3, IRF-3, IRF3

**Calculated MW**

47219 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**

Cytoplasm . Nucleus . Shuttles between cytoplasmic and nuclear compartments, with export being the prevailing effect. When activated, IRF3 interaction with CREBBP prevents its export to the cytoplasm.

**Tissue Specificity**

Expressed constitutively in a variety of tissues.

**Protein Name**

Interferon regulatory factor 3

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human IRF3(409-427aa KAYLQDLVEGMDFQGPGES), different from the related mouse and rat sequences by five amino acids.

Immunogen affinity purified.

No cross reactivity with other proteins

**At -20 °C for one year. After r° Constitution, at 4 °C for one month. It° Can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.**

Belongs to the IRF family.

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="http://www.uniprot.org/citations/22394562" target="\_blank">22394562</a>, PubMed:<a href="http://www.uniprot.org/citations/24049179" target="\_blank">24049179</a>, PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>, PubMed:<a href="http://www.uniprot.org/citations/27302953" target="\_blank">27302953</a>, PubMed:<a href="http://www.uniprot.org/citations/31340999" target="\_blank">31340999</a>, PubMed:<a href="http://www.uniprot.org/citations/36603579" target="\_blank">36603579</a>, PubMed:<a href="http://www.uniprot.org/citations/8524823" target="\_blank">8524823</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:<a href="http://www.uniprot.org/citations/11846977" target="\_blank">11846977</a>, PubMed:<a href="http://www.uniprot.org/citations/16846591" target="\_blank">16846591</a>, PubMed:<a href="http://www.uniprot.org/citations/16979567" target="\_blank">16979567</a>, PubMed:<a href="http://www.uniprot.org/citations/20049431" target="\_blank">20049431</a>, PubMed:<a href="http://www.uniprot.org/citations/32972995" target="\_blank">32972995</a>, PubMed:<a href="http://www.uniprot.org/citations/36603579" target="\_blank">36603579</a>, PubMed:<a href="http://www.uniprot.org/citations/8524823" target="\_blank">8524823</a>). 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:<a href="http://www.uniprot.org/citations/16846591" target="\_blank">16846591</a>, PubMed:<a href="http://www.uniprot.org/citations/16979567" target="\_blank">16979567</a>, PubMed:<a href="http://www.uniprot.org/citations/20049431" target="\_blank">20049431</a>, PubMed:<a href="http://www.uniprot.org/citations/36603579" target="\_blank">36603579</a>). 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:<a href="http://www.uniprot.org/citations/22394562" target="\_blank">22394562</a>, PubMed:<a href="http://www.uniprot.org/citations/25636800" target="\_blank">25636800</a>, PubMed:<a href="http://www.uniprot.org/citations/27302953" target="\_blank">27302953</a>, PubMed:<a href="http://www.uniprot.org/citations/36603579" target="\_blank">36603579</a>). 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:<a href="http://www.uniprot.org/citations/16154084" target="\_blank">16154084</a>, PubMed:<a href="http://www.uniprot.org/citations/27302953" target="\_blank">27302953</a>, PubMed:<a href="http://www.uniprot.org/citations/33440148" target="\_blank">33440148</a>, PubMed:<a href="http://www.uniprot.org/citations/36603579" target="\_blank">36603579</a>).

[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)). 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)). Key transcription factor regulating the IFN response during SARS-CoV-2 infection (PubMed:[33440148](http://www.uniprot.org/citations/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

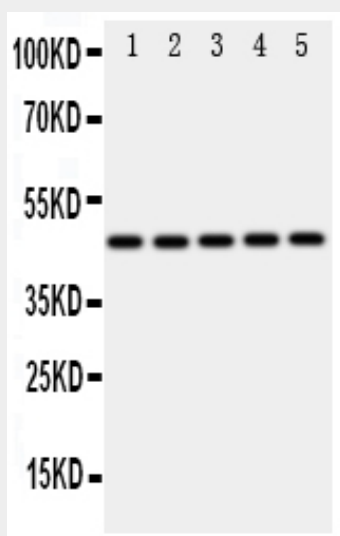
Expressed constitutively in a variety of tissues.

#### Anti-IRF3 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](#)

#### Anti-IRF3 Antibody - Images



Anti-IRF3 antibody, ABO11127, Western blotting All lanes: Anti IRF3 (ABO11127) at 0.5ug/ml Lane 1: A549 Whole Cell Lysate at 40ug Lane 2: HELA Whole Cell Lysate at 40ug Lane 3: JURKAT Whole

Cell Lysate at 40ug Lane 4: 293T Whole Cell Lysate at 40ug Lane 5: MCF-7 Whole Cell Lysate at 40ug  
Predicted bind size: 47KD Observed bind size: 47KD

### **Anti-IRF3 Antibody - Background**

IRF3(interferon regulatory factor 3) is a member of the interferon regulatory transcription factor(IRF) family. The IRF3 gene is mapped on 19q13.33. IRF3 is found in an inactive cytoplasmic form that upon serine/threonine phosphorylation forms a complex with CREBBP. IRF3 plays an important role in the innate immune system's response to viral infection. Aggregated MAVS have been found to activate IRF3 dimerization. Although IRF3 increased transcriptional activity from an ISRE-containing promoter, expression of IRF3 as a Gal4 fusion protein did not activate expression of a chloramphenicol acetyltransferase(CAT) reporter gene containing repeats of the Gal4-binding sites. Translocation of IRF3 was accompanied by an increase in serine and threonine phosphorylation. The transcriptional activators CREBBP and EP300 coimmunoprecipitated with IRF3 only subsequent to viral infection, and the authors stated that these are also subunits of DRAF1.