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IRF-3 Polyclonal Antibody

Catalog # AP70580

Product Information

Application WB, IHC-P **Primary Accession Q14653** Reactivity Human Host Rabbit **Polyclonal** Clonality Calculated MW 47219

Additional Information

Gene ID 3661

Other Names IRF3; Interferon regulatory factor 3; IRF-3

Dilution WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300.

ELISA: 1/20000. Not yet tested in other applications. 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

Protein Information

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

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,

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).

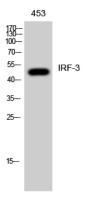
Tissue Location

Expressed constitutively in a variety of tissues.

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 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.

Images



Western Blot analysis of 453 cells using IRF-3 Polyclonal Antibody diluted at 1 : 1000

Western blot analysis of 293T lysis using IRF-3 antibody. Antibody was diluted at 1:1000



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