

IRF3 Rabbit mAb

Catalog # AP76555

Product Information

Application	WB, IHC-P, IP
Primary Accession	Q14653
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	47219

Additional Information

Gene ID	3661
Other Names	IRF3
Dilution	WB~~1/500-1/1000 IHC-P~~N/A IP~~N/A
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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 , PubMed: 39362857). 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](#)).

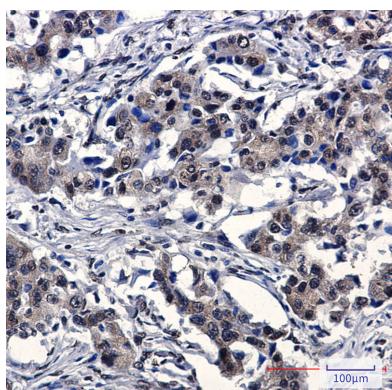
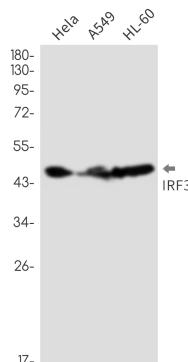
Cellular Location

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.

Images



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