ARG56578
anti-IRF3 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes IRF3
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, IHC-P, WB
Specificity	At least three isoforms of IRF3 are known to exist.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	IRF3
Species	Human
Immunogen	Synthetic peptide (14 aa) within aa. 330-380 of Human IRF3.
Conjugation	Un-conjugated
Alternate Names	IRF-3; Interferon regulatory factor 3

Application Instructions

Application table

Application	Dilution
ICC/IF	20 µg/ml
IHC-P	2 µg/ml
WB	1 - 4 µg/ml

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Positive Control: Ramos cell lysate

Properties

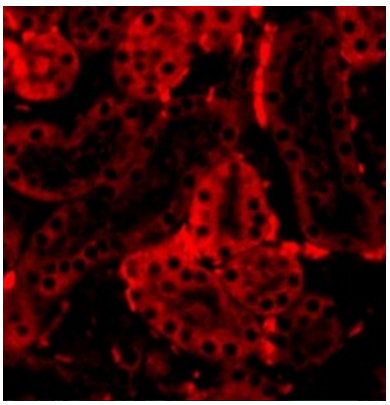
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

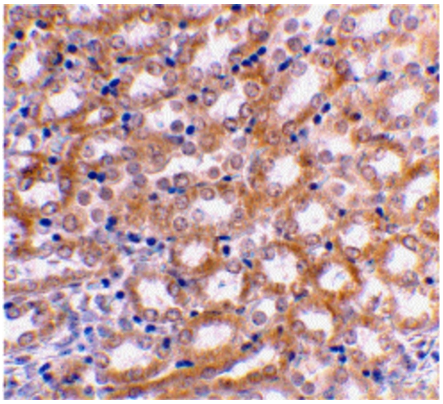
Database links	GeneID: 3661 Human GeneID: 54131 Mouse Swiss-port # P70671 Mouse Swiss-port # Q14653 Human
Gene Symbol	IRF3
Gene Full Name	interferon regulatory factor 3
Background	This gene encodes a member of the interferon regulatory transcription factor (IRF) family. The encoded protein is found in an inactive cytoplasmic form that upon serine/threonine phosphorylation forms a complex with CREBBP. This complex translocates to the nucleus and activates the transcription of interferons alpha and beta, as well as other interferon-induced genes. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Nov 2011]
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. 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. [UniProt]
Highlight	Related products: IRF3 antibodies; Anti-Rabbit IgG secondary antibodies; Related news: Exploring Antiviral Immune Response circNDUFB2, a circular RNA (circRNA), activates anti-tumor immunity
Calculated Mw	47 kDa
PTM	Constitutively phosphorylated on many Ser/Thr residues. C-terminal serine/threonine cluster is phosphorylated in response of induction by IKBKE and TBK1. Phosphorylated at Ser-396 by IKBKE upon ssRNA viral infection. Ser-385 and Ser-386 may be specifically phosphorylated in response to induction. Phosphorylation at Ser-386 by TBK1 results in oligomerization. An alternate model propose that the five serine/threonine residues between 396 and 405 are phosphorylated in response to a viral infection. (Microbial infection) Phosphorylation and subsequent activation of IRF3 is inhibited by vaccinia virus protein E3. Ubiquitinated; ubiquitination involves RBCK1 leading to proteasomal degradation. Polyubiquitinated; ubiquitination involves TRIM21 leading to proteasomal degradation. ISGylated by HERC5 resulting in sustained IRF3 activation and in the inhibition of IRF3 ubiquitination by disrupting PIN1 binding. The phosphorylation state of IRF3 does not alter ISGylation.

Images



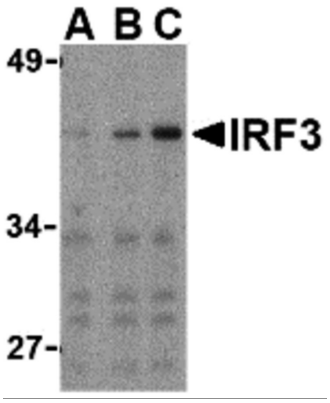
ARG56578 anti-IRF3 antibody ICC/IF image

Immunofluorescence: Mouse Kidney cells stained with ARG56578 anti-IRF3 antibody at 20 µg/ml dilution.



ARG56578 anti-IRF3 antibody IHC-P image

Immunohistochemistry: Mouse kidney stained with ARG56578 anti-IRF3 antibody at 2 µg/ml dilution.



ARG56578 anti-IRF3 antibody WB image

Western blot: Ramos whole cell lysate stained with ARG56578 anti-IRF3 antibody at (A) 1, (B) 2, and (C) 4 µg/ml dilution.