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#11904 IRF-3 (D6I4C) XP® Rabbit mAb

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rev. 08/19/19

Entrez-Gene ID #3661
UniProt ID #Q14653

For Research Use Only. Not For Use In Diagnostic Procedures.

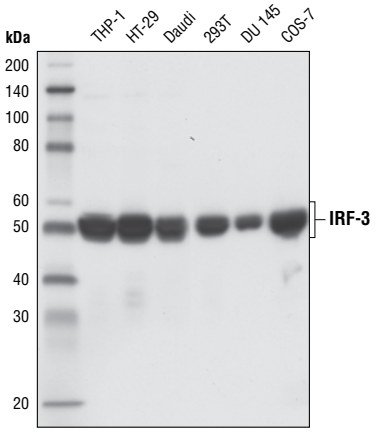
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC	H, Mk	50-55 kDa	Rabbit IgG**
Endogenous			

Background: Interferon regulatory factors (IRFs) comprise a family of transcription factors that function within the Jak/Stat pathway to regulate interferon (IFN) and IFN-inducible gene expression in response to viral infection (1). IRFs play an important role in pathogen defense, autoimmunity, lymphocyte development, cell growth, and susceptibility to transformation. The IRF family includes nine members: IRF-1, IRF-2, ISGF3γ/p48, IRF-3, IRF-4 (Pip/LSIRF/ICSAT), IRF-5, IRF-6, IRF-7, and IRF-8/ICSBP. All IRF proteins share homology in their amino-terminal DNA-binding domains. IRF family members regulate transcription through interactions with proteins that share similar DNA-binding motifs, such as IFN-stimulated response elements (ISRE), IFN consensus sequences (ICS), and IFN regulatory elements (IRF-E) (2).

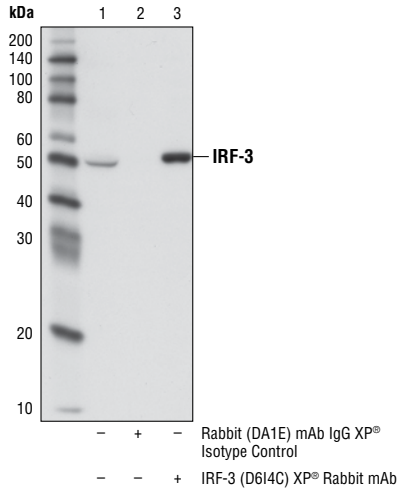
IRF-3 can inhibit cell growth and plays a critical role in controlling the expression of genes in the innate immune response (1-4). In unstimulated cells, IRF-3 is present in the cytoplasm. Viral infection results in phosphorylation of IRF-3 and leads to its translocation to the nucleus where it activates promoters containing IRF-3-binding sites. Phosphorylation of IRF-3 occurs at a cluster of C-terminal Ser and Thr residues (between 385 and 405), leading to its association with the p300/CBP co-activator protein that promotes DNA binding and transcriptional activity (5). During infection, IRF-3 is likely activated through a pathway that includes activation of Toll-like receptors and a kinase complex that includes IKKε and TBK1 (6,7). IRF-3 is phosphorylated at Ser396 following viral infection, expression of viral nucleocapsid, and double-stranded RNA treatment. These events likely play a role in activation of IRF-3 (8).

Specificity/Sensitivity: IRF-3 (D6I4C) XP® Rabbit mAb recognizes endogenous levels of total IRF-3 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with recombinant human IRF-3 protein.



Western blot analysis of extracts from various cell lines using IRF-3 (D6I4C) XP® Rabbit mAb.



Immunoprecipitation of IRF-3 from THP-1 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or IRF-3 (D6I4C) XP® Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using IRF-3 (D6I4C) XP® Rabbit mAb. Mouse Anti-rabbit IgG (Conformation Specific) (L27A9) mAb #3678 and Anti-mouse IgG, HRP-linked Antibody #7076 were used as secondary antibodies.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:100
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:200-1:800

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

(1) Taniguchi, T. et al. (2001) *Annu Rev Immunol* 19, 623-55.

(2) Honda, K. and Taniguchi, T. (2006) *Nat Rev Immunol* 6, 644-58.

(3) Hiscott, J. et al. (1999) *J Interferon Cytokine Res* 19, 1-13.

(4) Kim, T.Y. et al. (2003) *J Biol Chem* 278, 15272-8.

(5) Yoneyama, M. et al. (2002) *J Interferon Cytokine Res* 22, 73-6.

(6) Fitzgerald, K.A. et al. (2003) *Nat Immunol* 4, 491-6.

(7) Kopp, E. and Medzhitov, R. (2003) *Curr Opin Immunol* 15, 396-401.

(8) Servant, M.J. et al. (2003) *J Biol Chem* 278, 9441-7.

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