

Phospho-IRF-3 (Ser396) (4D4G) Rabbit mAb

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

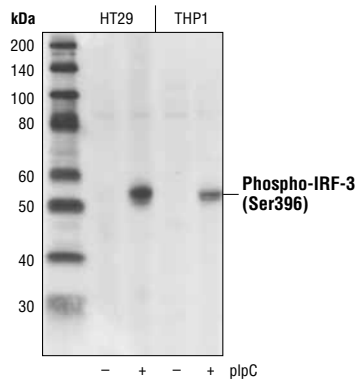
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, (Mk, Pg)	45-55 kDa	Rabbit IgG**

Background: Interferon regulatory factors (IRFs) comprise a family of transcription factors that function with 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 the 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 serine and threonine residues (between 385 and 405) leading to its association with the p300/CBP coactivator 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 of 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: Phospho-IRF-3 (Ser396) (4D4G) Rabbit mAb detects endogenous levels of IRF-3 when phosphorylated at Ser396.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser396 of human IRF-3.



Western blot analysis of extracts from HT29 and THP1 cells, control or pIpC-transfected (1 hour), using Phospho-IRF-3 (Ser396) (4D4G) Rabbit mAb.

Entrez-Gene ID #3661
Swiss-Prot Acc. #Q14653

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 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

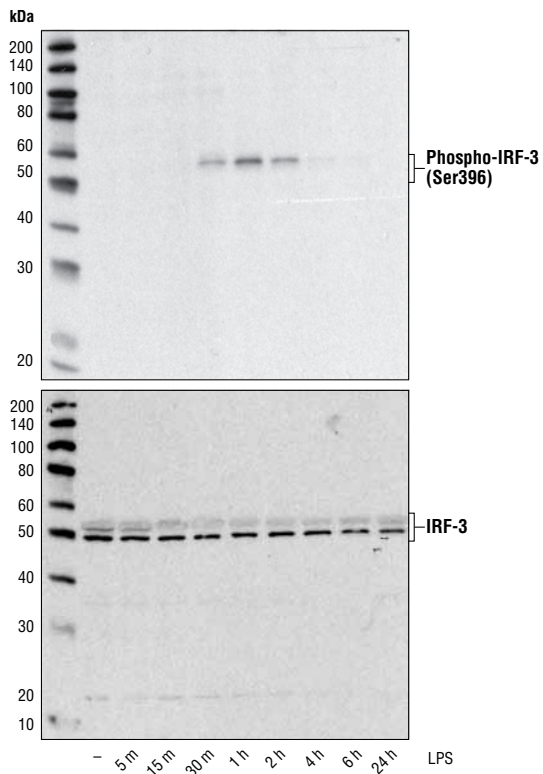
Background References:

- (1) Taniguchi, T. et al. (2001) *Annu. Rev. Immunol.* 19, 623–655.
- (2) Honda, K. and Taniguchi, T. (2006) *Nat. Rev. Immunol.* 6, 644–658.
- (3) Hiscott, J. et al. (1999) *J. Interferon Cytokine Res.* 19, 1–13.
- (4) Kim, T.Y. et al. (2003) *J. Biol. Chem.* 278, 15272–15278.
- (5) Yoneyama, M. et al. (2002) *J. Interferon Cytokine Res.* 22, 73–76.
- (6) Fitzgerald, K.A. et al. (2003) *Nat. Immunol.* 4, 491–496.
- (7) Kopp, E. and Medzhitov, R. (2003) *Curr. Opin. Immunol.* 15, 396–401.
- (8) Servant, M.J. et al. (2003) *J. Biol. Chem.* 278, 9441–9447.

Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patents No. 5,675,063 and 7,429,487) from Eptomics, Inc.

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.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Western blot analysis of extracts from THP-1 cells, differentiated with TPA (#9905, 80 nM for 24h) and treated with 1 μ g/ml LPS for the indicated times, using Phospho-IRF-3 (Ser396) (4D4G) Rabbit mAb (upper) and IRF-3 Antibody #4962 (lower).