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Phospho-IRF-3 (Ser396) (D6O1M) Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, FC-FP	H M R	Endogenous	45-55	Rabbit IgG	#Q14653	3661

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:100 - 1:400
Flow Cytometry (Fixed/Permeabilized)	1:50 - 1:200

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.*

For a carrier free (BSA and azide free) version of this product see product #61166.

Specificity / Sensitivity

Phospho-IRF-3 (Ser396) (D6O1M) Rabbit mAb recognizes endogenous levels of IRF-3 protein only when phosphorylated at Ser396.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser396 of human IRF-3 protein.

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, IRF-9/ISGF3γ, 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 the activation of IRF-3 (8).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)
FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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