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

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

Applications: FC-FP	Reactivity: H M R	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q14653	Entrez-Gene Id: 3661
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Product Usage Information

Application

Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

Phospho-IRF-3 (Ser396) (D6O1M) Rabbit mAb (PE Conjugate) 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.

Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-IRF-3 (Ser396) (D6O1M) Rabbit mAb #29047.

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/ISGF3 γ , 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 IKK ϵ 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.

Species Reactivity

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

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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