Revision 1

Store at -20C

#24129

Phospho-IRF-7 (Ser437/438) (D6M2I) Rabbit mAb

Cell Signaling TECHNOLOGY®

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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:
W	M	Endogenous	55	Rabbit IgG	#P70434	54123

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

Specificity/Sensitivity

Phospho-IRF-7 (Ser437/438) (D6M2I) Rabbit mAb recognizes endogenous levels of mouse IRF-7 protein when dually phosphorylated at Ser437 and Ser438. This antibody has a preference for Ser437 and can recognize single phosphorylation at this site.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phospho-peptide corresponding to residues surrounding Ser437/438 of mosue IRF-7 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-7, which is functionally similar to IRF-3, is preferentially expressed in lymphoid cells and induced by virus, LPS, and IFN-α (3-5). IRF-7 plays an essential role in the induction of type I interferon in response to viral infection (6-8). Like IRF-3, IRF-7 is regulated at multiple serine phosphorylation sites near its carboxyl terminus, which are required for nuclear translocation, DNA binding, and transcriptional activity (9-11).

Background References

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3. Au, W.C. et al. (1998) *J Biol Chem* 273, 29210-7.
4. Wathelet, M.G. et al. (1998) *Mol Cell* 1, 507-18.
5. Marié, I. et al. (1998) *EMBO J* 17, 6660-9.
6. Sato, M. et al. (2000) *Immunity* 13, 539-48.
7. Honda, K. et al. (2005) *Nature* 434, 772-7.
8. Colina, R. et al. (2008) *Nature* 452, 323-8.
9. Lin, R. et al. (2000) *J Biol Chem* 275, 34320-7.
10. Yang, H. et al. (2003) *J Biol Chem* 278, 15495-504.
11. Caillaud, A. et al. (2005) *J Biol Chem* 280, 17671-7.

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

W: Western Blotting

Cross-Reactivity Key

M: Mouse

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