Revision 1

IRF-5 Antibody

#3257 Store at -20C

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, IP, IF-IC	H	Endogenous	60	Rabbit	#Q13568	3663

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:100

Storage

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

Specificity/Sensitivity

IRF-5 Antibody detects endogenous levels of total IRF-5 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxyl terminus of human IRF-5 protein. Antibodies were purified by protein A and peptide affinity chromatography.

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-5 is expressed in lymphoid tissues and peripheral blood lymphocytes and participates in the induction of type I interferon genes following viral infection (3). Activation of IRF-5 signaling is triggered by the toll-like receptor (TLR) pathway, including TLR7 and MyD88 (4,5). Genetic variants of IRF-5 have been associated with disorders where the IFN pathway is abnormally activated, such as systemic lupus erythematosus (6,7).

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. Barnes, B.J. et al. (2001) *J. Biol. Chem.* 276, 23382-23390.
4. Takaoka, A. et al. (2005) *Nature* 434, 243-249.
5. Schoenemeyer, A. et al. (2005) *J. Biol. Chem.* 280, 17005-17012.
6. Sigurdsson, S. et al. (2005) *Am. J. Hum. Genet.* 76, 528-537.
7. Graham, G. et al. (2006) *Nat. Genet.* 38, 550-555.

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 **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human

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