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IRF-4 Antibody

Store at -20C
#4964

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

Applications: W, W-S, IP, ChIP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 51	Source/Isotype: Rabbit	UniProt ID: #Q15306	Entrez-Gene Id: 3662
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Product Usage Information

For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP.

This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:50
Chromatin IP	1:50

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-4 Antibody detects endogenous levels of IRF-4 protein. The antibody does not cross-react with other family members at physiological levels.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues around Asp175 of human IRF-4. Antibodies are 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-4 was independently cloned by three groups and demonstrated to have roles in different contexts of lymphoid regulation (3-5). First, IRF-4 (Pip) was found to associate with PU.1, a hematopoietic specific member of the ETS family, and to regulate the expression of B-cell specific genes (3). Second, it was characterized as a lymphoid-specific member of the IRF family (LSIRF) and able to bind to ISRE (4). Third, it was identified in activated T cells as a factor that binds to the promoter of the interleukin-5 gene (ICSAT), and shown to repress gene activation induced by IFN (5). IRF-4 is expressed in all stages of B cell development and in mature T cells, and is inducible in primary lymphocytes by antigen mimetic stimuli such as Concanavalin A, CD3 crosslinking, anti-IgM and PMA treatment (4,5). Mice deficient in IRF-4 show normal distribution of B and T lymphocytes at 4 to 5 weeks, but later develop progressive generalized lymphadenopathy, suggesting a role for IRF-4 in the function and homeostasis of mature B- and T-lymphocytes (6).

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. Eisenbeis, C.F. et al. (1995) *Genes Dev* 9, 1377-87.
4. Matsuyama, T. et al. (1995) *Nucleic Acids Res* 23, 2127-36.
5. Yamagata, T. et al. (1996) *Mol Cell Biol* 16, 1283-94.
6. Mittrücker, H.W. et al. (1997) *Science* 275, 540-3.

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 **W-S:** Simple Western™ **IP:** Immunoprecipitation **ChIP:** Chromatin IP

Cross-Reactivity Key

H: Human

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