

#4299 Store at -20°C

IRF-4 (D43H10) Rabbit mAb

100 µl
 (10 western blots)



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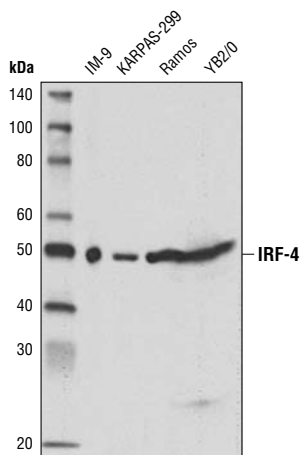
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, ChIP Endogenous	H, R	51 kDa	Rabbit IgG**

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, ISGF3γ/p48, 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).

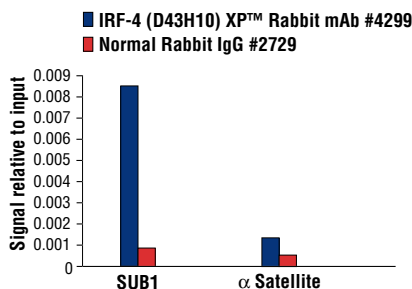
IRF-4 was independently cloned by three groups and demonstrated to have roles in different contexts of lymphoid regulation (3-5). First, IRF-4 (Pip) was found to associate with PU.1, a hematopoietic specific member of the ETS family, and to regulate the expression of B-cell specific genes (3). Second, it was characterized as a lymphoid-specific member of the IRF family (LSIRF) 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 concavalin A, CD3 cross-linking, 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).

Specificity/Sensitivity: IRF-4 (D43H10) Rabbit mAb detects endogenous levels of total IRF-4 protein. The antibody does not cross-react with other family members at physiological levels.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues around Asp175 of human IRF-4.



Western blot analysis of extracts from various cell lines using IRF-4 (D43H10) Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4×10^6 H929 cells and either 5 µl of IRF-4 (D43H10) XP™ Rabbit mAb or 2 µl of Normal Rabbit IgG #2729 using SimpleChIP™ Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by Real-Time PCR using SimpleChIP™ Human SUB1 Promoter Primers #5156 and SimpleChIP™ Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.

Entrez-Gene ID #3662
Swiss-Prot Acc. #Q15306

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.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Chromatin IP	1:100

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.