Revision 1

#4943 Store at -20C

IRF-2 Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	45	Rabbit	#P14316	3660

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	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-2 Antibody detects endogenous levels of total IRF-2 protein.

Species predicted to react based on 100% sequence homology:

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp327 of human IRF-2 protein. Antibodies were purified by 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).

Structurally similar to other IRF family members, IRF-2 acts as both a transcription activator and repressor. IRF-2 promotes transcription of several genes, including histone H4, the VCAM1 cell adhesion protein, and CIITA, a MHC transactivator protein. Conversely, IRF-2 competitively binds to promoter sites utilized by IRF-1, repressing activation by this related transcription factor (3). Its activity may be controlled by inducible proteolysis (4). IRF-2 has also been associated with increased oncogenic potential (5,6) and lymphocyte development (7,8).

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.
3. Harada, H. et al. (1989) *Cell* 58, 729-739.
4. Palombella, V.J. and Maniatis, T. (1992) *Mol. Cell Biol.* 12, 3325-3336.
5. Harada, H. et al. (1993) *Science* 259, 971-974.
6. Nguyen, H. et al. (1995) *Oncogene* 11, 537-544.
7. Matsuyama, T. et al. (1993) *Cell* 75, 83-97.
8. Lohoff, M. et al. (2000) *J. Exp. Med.* 192, 325-336.

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

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses