Revision 1

Store at -20C

#6948

IRF-6 Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	58, 60	Rabbit	#O14896	3664

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	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-6 Antibody recognizes endogenous levels of total IRF-6 protein.

Species predicted to react based on 100% sequence homology

Monkey, Bovine, Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly121 of human IRF-6 protein. 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).

While IRF family members generally function in innate immune responses, IRF-6 has not been associated in that role. Original studies of IRF-6 found that mutation of the *IRF-6* gene caused Van der Woude Syndrome, an autosomal dominant disorder resulting in mouth abnormalities including cleft lip and palate (3). IRF-6 knockouts show a hyperproliferative epidermis that fails to undergo keratinocyte differentiation (4). IRF-6 has also been found to interact with the mammary tumor suppressor maspin, and like maspin is expressed in normal mammary epithelial but reduced or absent in breast carcinoma (5). Cellular proliferation may promote IRF-6 phosphorylation leading to its proteasomal dependent degradation (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. Kondo, S. et al. (2002) *Nat Genet* 32, 285-9.
4. Richardson, R.J. et al. (2006) *Nat Genet* 38, 1329-34.
5. Bailey, C.M. et al. (2005) *J Biol Chem* 280, 34210-7.
6. Bailey, C.M. et al. (2008) *Mol Cell Biol* 28, 2235-43.

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

Cross-Reactivity Key

H: Human

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