

Store at  
-20°C

#43573

# Type I Interferon Induction and Signaling Antibody Sampler Kit



Support: +1-978-867-2388 (U.S.)  
www.cellsignal.com/support

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

New 05/20

**For Research Use Only. Not For Use In Diagnostic Procedures.**

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Phospho-IRF-3 (Ser386) (E7J8G) XP <sup>®</sup> Rabbit mAb	37829	20 µl	50-55 kDa	Rabbit IgG
IRF-3 (D6I4C) XP <sup>®</sup> Rabbit mAb	11904	20 µl	50-55 kDa	Rabbit IgG
Phospho-IRF-7 (Ser477) (D7E1W) Rabbit mAb	12390	20 µl	65 kDa	Rabbit IgG
IRF-7 (D2A1J) Rabbit mAb	13014	20 µl	65 kDa	Rabbit IgG
IFN-β1 (D1D7G) Rabbit mAb	73671	20 µl	19, 21 kDa	Rabbit IgG
Phospho-Stat1 (Ser727) (D3B7) Rabbit mAb	8826	20 µl	91 kDa	Rabbit IgG
Stat1 (D1K9Y) Rabbit mAb	14994	20 µl	84, 91 kDa	Rabbit IgG
IRF-9 (D2T8M) Rabbit mAb	76684	20 µl	48 kDa	Rabbit IgG
MX1 (D3W7I) Rabbit mAb	37849	20 µl	76 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

See [www.cellsignal.com](http://www.cellsignal.com) for individual component applications, species cross-reactivity, dilutions and additional application protocols.

**Description:** The Type I Interferon Induction and Signaling Antibody Sampler Kit provides an economical means of detecting the activation of pathways leading to upregulation of type I interferon (IFN), expression of IFN-β1, activation of signaling downstream of type I IFN, and expression of the MX1 interferon response gene, using phospho-specific and control antibodies. The kit includes enough antibodies to perform at least two western blot experiments.

**Background:** The innate immune system uses pattern recognition receptors (PRRs) that detect conserved pathogen-associated molecular patterns (PAMPs), such as cytoplasmic double-stranded RNA, to detect and initiate an immune response to viral infection. Detection of virus by PRRs leads to phosphorylation and nuclear translocation of IRF-3 and IRF-7, resulting in upregulation of type I interferons, which include IFN-α and IFN-β (1-3). Type I interferons signal through the interferon α/β receptor (IFNAR), leading to phosphorylation and activation of Stat1 and Stat2, which form a complex with IRF-9 (4,5). This complex translocates to the nucleus where it induces transcription of interferon response genes including viral restriction factors, such as MX1, that limit viral replication and propagation (4-7).

**Specificity/Sensitivity:** Each antibody in the Type I Interferon Induction and Signaling Antibody Sampler Kit recognizes endogenous levels of its target protein. Phospho-IRF-3 (Ser386) (E7J8G) XP<sup>®</sup> Rabbit mAb recognizes endogenous levels of IRF-3 protein only when phosphorylated at Ser386. Phospho-IRF-7 (Ser477) (D7E1W) Rabbit mAb recognizes endogenous levels of IRF-7 protein only when phosphorylated at Ser477 and can also detect IRF-7 when dually phosphorylated at Ser477 and Ser479. Phospho-IRF-7 (Ser477) (D7E1W) Rabbit mAb may cross-react with unidentified proteins of 100 and 150 kDa. Phospho-Stat1 (Ser727) (D3B7) Rabbit mAb recognizes endogenous levels of Stat1 protein only when phosphorylated at Ser727. Stat1 (D1K9Y) Rabbit mAb cross-reacts with an unidentified protein of 150 kDa. IRF-9 (D2T8M) Rabbit mAb cross-reacts with an unidentified protein of 95 kDa.

**Source/Purification:** Monoclonal antibodies are produced by immunizing rabbits with synthetic peptides corresponding to residues surrounding Pro115 of human IRF-7, Pro688 of human Stat1, Leu292 of human MX1, recombinant human IRF-3 protein, recombinant human IFN-β1 protein, and recombinant human IRF-9 protein. Phosphorylation-specific monoclonal antibodies are produced by immunizing rabbits with synthetic peptides corresponding to residues surrounding Ser386 of human IRF-3, Ser477 of human IRF-7, and Ser727 of human Stat1.

**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 antibodies.

**For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).**

#### Background References:

- (1) Servant, M.J. et al. (2003) *J Biol Chem* 278, 9441-7.
- (2) Lin, R. et al. (2000) *J Biol Chem* 275, 34320-7.
- (3) Sato, M. et al. (2000) *Immunity* 13, 539-48.
- (4) Fu, X.Y. et al. (1990) *Proc Natl Acad Sci U S A* 87, 8555-9.
- (5) Qureshi, S.A. et al. (1995) *Proc Natl Acad Sci U S A* 92, 3829-33.
- (6) Staeheli, P. et al. (1986) *Cell* 44, 147-58.
- (7) Staeheli, P. and Haller, O. (1985) *Mol Cell Biol* 5, 2150-3.

Thank you for your recent purchase. If you would like to provide a review visit [www.cellsignal.com/comments](http://www.cellsignal.com/comments).

[www.cellsignal.com](http://www.cellsignal.com)

© 2020 Cell Signaling Technology, Inc.

XP and Cell Signaling Technology are trademarks of Cell Signaling Technology, Inc.

**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** 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.