Store at -20°C

#38866

Human-Reactive STING Pathway Antibody Sampler Kit

Cell Signaling TECHNOLOGY®

Support: +1-978-867-2388 (U.S.)
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New 08/19

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
STING (D2P2F) Rabbit mAb	13647	20 µl	33, 35 kDa	Rabbit IgG
P-STING (Ser366) (E9A9K) Rabbit mAb	50907	20 µl	40 kDa	Rabbit IgG
cGAS (D1D3G) Rabbit mAb	15102	20 µl	62 kDa	Rabbit IgG
TBK1/NAK (D1B4) Rabbit mAb	3504	20 µl	84 kDa	Rabbit IgG
P-TBK1/NAK (Ser172) (D52C2) XP® Rabbit mAb	5483	20 µl	84 kDa	Rabbit IgG
IRF-3 (D6I4C) XP® Rabbit mAb	11904	20 µl	50-55 kDa	Rabbit IgG
P-IRF-3 (Ser396) (D6O1M) Rabbit mAb	29047	20 µl	45-55 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions and additional application protocols.

Description: The Human-Reactive STING Pathway Antibody Sampler Kit provides an economical means of detecting activation and expression of key components of the STING pathway using phospho-specific and control antibodies. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Background: Stimulator of interferon genes (STING, TMEM173, MITA) is a transmembrane adaptor protein that is a critical component of the cellular innate immune response to pathogenic cytoplasmic DNA (1,2). STING is a ubiquitously expressed protein found predominantly in the ER (1). The enzyme cGAMP synthase (cGAS) produces the second messenger cyclic-GMP-AMP (cGAMP) in response to cytoplasmic DNA (3,4). cGAMP binds and activates STING (3,4). In addition, detection of cytoplasmic DNA by nucleic acid sensors, including DDX41 or IFI16, results in STING activation (5,6). Following activation, STING translocates with TBK1 to perinuclear endosomes and gets phosphorylated by ULK1 at Ser366 (Ser365 in mouse) (7, 8). The TBK1 kinase phosphorylates and activates IRF-3 and NF-κB, which leads to the induction of type I interferon and other immune response genes (1,2,7).

Specificity/Sensitivity: Each antibody in the Human-Reactive STING Pathway Antibody Sampler Kit detects endogenous levels of its target protein. Phospho-STING (Ser366) (E9A9K) Rabbit mAb recognizes endogenous levels of STING protein only when phosphorylated at Ser366. Phospho-TBK1/NAK (Ser172) (D52C2) XP® Rabbit mAb detects endogenous levels of TBK1 only when phosphorylated at Ser172. Phospho-TBK1/NAK (Ser172) (D52C2) XP® Rabbit mAb may cross-react with phospho-IKKε. Phospho-IRF-3 (Ser396) (D6O1M) Rabbit mAb recognizes endogenous levels of IRF-3 protein only when phosphorylated at Ser396.

Source/Purification: Monoclonal antibodies are produced by immunizing rabbits with synthetic peptides corresponding to residues surrounding Ala19 of human cGAS protein, Ser645 of human TBK1/NAK, Pro226 of human STING, and recombinant human IRF-3 protein. Phosphorylation-specific monoclonal antibodies are produced by immunizing rabbits with synthetic peptides corresponding to residues surrounding Ser366 of human STING protein, Ser172 of human TBK1, and Ser396 of human IRF-3.

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.*

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

Background References:

(1) Ishikawa, H. and Barber, G.N. (2008) *Nature* 455, 674-8.
(2) Zhong, B. et al. (2008) *Immunity* 29, 538-50.
(3) Sun, L. et al. (2013) *Science* 339, 786-91.
(4) Wu, J. et al. (2013) *Science* 339, 826-30.
(5) Zhang, Z. et al. (2011) *Nat Immunol* 12, 959-65.
(6) Unterholzner, L. et al. (2010) *Nat Immunol* 11, 997-1004.
(7) Ishikawa, H. et al. (2009) *Nature* 461, 788-92.
(8) Konno, H. et al. (2013) *Cell* 155, 688-98.

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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.