Revision 3

Store at -20C

#52239

Innate Immunity Activation Antibody Sampler Kit

1 Kit (9 x 20 microliters)

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

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-STING (Ser366) (D7C3S) Rabbit mAb	19781	20 µl	40 kDa	Rabbit IgG
STING (D2P2F) Rabbit mAb	13647	20 µl	33, 35 kDa	Rabbit IgG
Phospho-IRF-3 (Ser396) (D6O1M) Rabbit mAb	29047	20 µl	45-55 kDa	Rabbit IgG
IRF-3 (D6I4C) XP® Rabbit mAb	11904	20 µl	50-55 kDa	Rabbit IgG
Phospho-IRAK4 (Thr345/Ser346) (D6D7) Rabbit mAb	11927	20 µl	55 kDa	Rabbit IgG
IRAK4 Antibody	4363	20 µl	55 kDa	Rabbit
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
Cleaved-IL-1β (Asp116) (D3A3Z) Rabbit mAb	83186	20 µl	17 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Innate Immunity Activation Antibody Sampler Kit provides an economical means of detecting the activation of multiple signaling pathways involved in innate immunity using phospho-specific, cleavage-specific, and control antibodies. The kit contains enough primary antibodies to perform at least two western blot experiments.

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.

Background

The innate immune system responds rapidly to pathogens by detecting conserved pathogen-associated molecular patterns (PAMPs) and damage/danger-associated molecular patterns (DAMPs) through pattern recognition receptors (PRRs). There are several families of PRRs. Toll-like receptors (TLRs) are transmembrane PRRs and signal through recruitment of adaptor proteins, including MyD88, which leads to recruitment and phosphorylation of IRAK1 and IRAK4, followed by activation of NF-κB and MAP kinases (1-3). Some TLRs also activate IRFs, which upregulate the type I interferon response. Activation of TLR3 and TLR4 results in phosphorylation and activation of IRF-3, while TLR7, TLR8, and TLR9 lead to activation of IRF-7 (2, 3). STING is a multi-pass ER transmembrane protein that is activated in response to intracellular DNA downstream of DNA-sensing cytoplasmic PRRs, such as DDX41, or by binding the second messenger cyclic-GMP-AMP (cGAMP) produced by cGAS (4-6). Following activation, STING translocates with TBK1 to perinuclear endosomes, leading to phosphorylation and activation of IRF-3 and NF-κB (7, 8). Following activation and translocation, STING gets phosphorylated by ULK1, resulting in STING inactivation and degradation (9). Inflammasomes are cytoplasmic multimeric protein complexes that assemble in response to PAMPs or DAMPs detected by AIM2 or members of the nod-like receptor (NLR) family, such as NLRP3 (10). Inflammasomes activate Caspase-1, which cleaves the IL-1β and IL-18 precursor proteins into the mature forms (10).

Background References

1. Janssens, S. and Beyaert, R. (2003) *Mol Cell* 11, 293-302.
2. Barton, G.M. and Kagan, J.C. (2009) *Nat Rev Immunol* 9, 535-42.
3. Blasius, A.L. and Beutler, B. (2010) *Immunity* 32, 305-15.
4. Ishikawa, H. and Barber, G.N. (2008) *Nature* 455, 674-8.
5. Zhang, Z. et al. (2011) *Nat Immunol* 12, 959-65.
6. Sun, L. et al. (2013) *Science* 339, 786-91.
7. Zhong, B. et al. (2008) *Immunity* 29, 538-50.
8. Ishikawa, H. et al. (2009) *Nature* 461, 788-92.
9. Konno, H. et al. (2013) *Cell* 155, 688-98.
10. Rathinam, V.A. and Fitzgerald, K.A. (2016) *Cell* 165, 792-800.

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