

Store at  
-20°C

#90144

## NETosis Antibody Sampler Kit



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

Orders: 877-616-2355 (U.S.)  
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For Research Use Only. Not For Use In Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt.	Isotype/Source
Neutrophil Elastase (E9C9L) XP® Rabbit mAb	89241	20 µL	30 kDa	Rabbit IgG
Myeloperoxidase (E1E7I) XP® Rabbit mAb	14569	20 µL	60, 80-90 kDa	Rabbit IgG
Histone H3 (D1H2) XP® Rabbit mAb	4499	20 µL	17 kDa	Rabbit IgG
Cathepsin G (E3N3O) Rabbit mAb	63665	20 µL	29 kDa	Rabbit IgG
Citrullinated Histone H3 (Arg17) (E403F) Rabbit mAb	97272	20 µL	17 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 NETosis Antibody Sampler Kit provides an economical means of detecting proteins involved in NETosis. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

**Background:** NETosis is a unique form of regulated cell death that is characterized by membrane rupture and the extrusion of chromatin, histones, and granular and cytoplasmic components into a web-like structure called neutrophil extracellular traps (NETs) (reviewed in 1). NETosis has been associated with host defense to pathogens as well as a number of disease states, including autoimmune diseases, thrombosis, cardiovascular diseases, and tumor progression. NETosis was identified as a response to bacterial infection and can be activated by lipopolysaccharide (LPS) as well as inflammatory pathway activators like phorbol-12-myristate-13-acetate (PMA) (2). It can occur via multiple pathways, but several key players have emerged. The calcium-dependent enzyme protein arginine deiminase 4 (PAD4) catalyzes hypercitrullination of histones that contributes to chromatin decondensation (3-5). In addition, activation of proteases, including neutrophil elastase (ELANE), myeloperoxidase (MPO), and Cathepsin G, leads to impairment of cytoskeletal structures and degradation of histones during NETosis (6,7).

**Specificity/Sensitivity:** Each antibody in the NETosis Antibody Sampler Kit detects endogenous levels of its target protein. Myeloperoxidase (E1E7I) XP® Rabbit mAb recognizes the full-length and heavy chain subunits of human myeloperoxidase protein. Citrullinated Histone H3 (Arg17) (E403F) Rabbit mAb may also recognize histone H3 citrullinated at residue Arg26 but does not cross-react with any other known citrullinated or methylated arginine residues on histone H3. This antibody may react with a band of unknown identity at 38 kDa. Histone H3 (D1H2) XP® Rabbit mAb detects isoforms H3.1, H3.2, and H3.3. This antibody also detects the histone H3 variant CENP-A. This antibody does not cross-react with other core histones.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding Pro734 of human myeloperoxidase protein, Pro130 of human Cathepsin G protein, residues near the carboxy terminus of human neutrophil elastase protein and histone H3, and residues near the amino terminus of histone H3 in which Arg17 is citrullinated.

**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.

Please visit [www.cellsignal.com](http://www.cellsignal.com) for validation data and a complete listing of recommended companion products.

#### Background References:

- (1) Thiam, H.R. et al. (2020) *Annu Rev Cell Dev Biol* 36, 191-218.
- (2) Brinkmann, V. et al. (2004) *Science* 303, 1532-5.
- (3) Li, P. et al. (2010) *J Exp Med* 207, 1853-62.
- (4) Wong, S.L. and Wagner, D.D. (2018) *FASEB J*, fj201800691R.
- (5) Wong, S.L. and Wagner, D.D. (2018) *FASEB J*, fj201800691R.
- (6) Papayannopoulos, V. et al. (2010) *J Cell Biol* 191, 677-91.
- (7) Metzler, K.D. et al. (2014) *Cell Rep* 8, 883-96.

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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.