

#90144 Store at -20°C

NETosis Antibody Sampler Kit



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

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

1 Kit (5 x 20 microliters)

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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) (E4O3F) Rabbit mAb	97272	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 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.

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 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 (3,4). 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 (5,6).

- 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. Papayannopoulos, V. et al. (2010) *J Cell Biol* 191, 677-91.
 6. Metzler, K.D. et al. (2014) *Cell Rep* 8, 883-96.

Trademarks and Patents Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. XP is a registered trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner

that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.