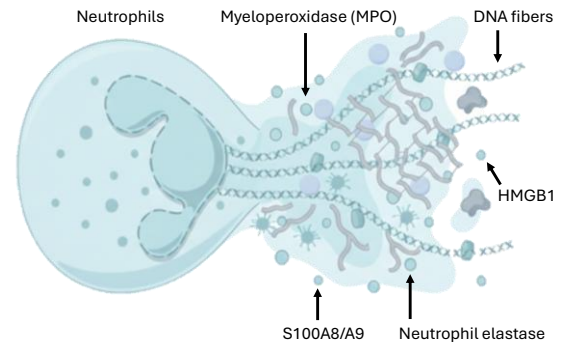




Neutrophil Extracellular Traps (NETs) Research



Neutrophils are innate immune cells that protect the host against bacterial and viral infections by phagocytizing pathogens and releasing antimicrobial substances. Under pathological conditions, neutrophils release web-like structures called neutrophil extracellular traps (NETs) (Figure 1) (1). These structures are composed of extracellular DNA decorated with antimicrobial and proinflammatory proteins, including neutrophil elastase (NE), myeloperoxidase (MPO), high-mobility group box 1 (HMGB1), and calprotectin complexes (S100A8/A9). These components elicit an antimicrobial activity as well as promote cellular damage, amplify inflammatory signaling, and exacerbate tissue injury (2–4). In addition to inflammation, NETs can disrupt redox homeostasis and establish a tumor microenvironment that promotes tumor cell proliferation and migration (5). Although NET formation plays a protective role during infection, excessive or dysregulated NET production exacerbates inflammatory, autoimmune, and cancer-associated diseases. The following products may be helpful in elucidating the role of NETs in the inflammatory immune response



NETs Research Products

Product	Catalog #
DNA Assay Kit	6023
Human NE Detection Kit	6057
Mouse MPO Detection Kit	6051
Mouse S100A8 Detection Kit	6054
Mouse S100A9 Detection Kit	6056
HMGB1 Detection kit	6010
LPS for neutrophil activation	9028
Anti-DNA Monoclonal Antibody	7115
Anti-Human NE Monoclonal Antibody	7163
Anti-Mouse MPO Monoclonal Antibodies	7159 & 7160
Anti-Mouse S100A8 Monoclonal Antibody	7164
Anti-Mouse S100A9 Monoclonal Antibody	7165
Anti-HMGB1 Antibodies*	7047

*Chondrex, Inc. provides more anti-HMGB1 antibodies than listed here. For more information, please visit www.chondrex.com or contact support@chondrex.com

References

1. F. V. S. Castanheira *et al.*, Neutrophils and NETs in modulating acute and chronic inflammation. *Blood* **133**, 2178–2185 (2019).
2. A. U. Morales-Primo *et al.*, Neutrophil extracellular trap-associated molecules: a review on their immunophysiological and inflammatory roles. *Int. Rev. Immunol.* **41**, 253–274 (2022).
3. A. T. P. Ngo *et al.*, Building a better NET: Neutrophil extracellular trap targeted therapeutics in the treatment of infectious and inflammatory disorders. *Res. Pract. Thromb. Haemost.* **6**, e12808 (2022).
4. U. Demkow, Molecular Mechanisms of Neutrophil Extracellular Trap (NETs) Degradation. *Int. J. Mol. Sci.* **24** (2023).
5. Z. Liu, et al, Neutrophil extracellular traps in tumor metabolism and microenvironment. *Biomark. Res.* **13**, 12 (2025).