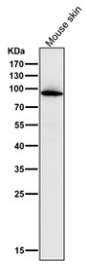
MPO Antibody / Myeloperoxidase [clone 32M13] (FY12854)

Catalog No.	Formulation	Size
FY12854	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32M13
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P05164
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200
Limitations	This MPO antibody is available for research use only.



Western blot testing of mouse skin lysate with the MPO antibody at 1:1000 dilution for 1 hour at room temperature. Predicted molecular weight ~73 kDa but may be observed at higher molecular weights due to glycosylation.

Description

MPO antibody detects myeloperoxidase, an abundant heme-containing enzyme encoded by the MPO gene. Myeloperoxidase is stored in the azurophilic granules of neutrophils and monocytes and plays a central role in host defense by generating reactive oxidants. Upon activation, myeloperoxidase catalyzes the conversion of hydrogen peroxide and chloride ions into hypochlorous acid, a potent antimicrobial oxidant that contributes to pathogen killing

during the respiratory burst.

Myeloperoxidase has long been used as a histochemical marker for neutrophil activity. Detection with MPO antibody reveals the distribution and abundance of neutrophils in tissues, aiding in studies of infection, inflammation, and immune-mediated disorders. Elevated levels of myeloperoxidase are also associated with chronic inflammatory diseases, including atherosclerosis and rheumatoid arthritis. In cardiovascular research, plasma MPO concentration is studied as a potential biomarker for coronary artery disease and acute coronary syndromes.

Beyond host defense, excessive or misplaced MPO activity can cause tissue injury by generating reactive oxygen species and halogenated products. This has been implicated in neurodegenerative disorders such as Parkinson's and Alzheimer's disease. Using MPO antibody, researchers are able to map protein distribution in affected tissues and evaluate its contribution to disease progression.

In oncology, myeloperoxidase serves as a lineage marker distinguishing myeloid leukemias from lymphoid subtypes. Immunohistochemical detection with MPO antibody remains a diagnostic tool in hematopathology, where positive staining confirms myeloid origin. Flow cytometry and ELISA-based detection further expand applications of this antibody in clinical and research settings.

Because myeloperoxidase contributes to both protective immunity and pathological inflammation, it represents a dual-interest protein for immunologists, pathologists, and cardiovascular researchers. NSJ Bioreagents provides validated MPO antibody reagents that support reliable analysis across multiple platforms, including western blotting, immunohistochemistry, ELISA, and flow cytometry.

Application Notes

Optimal dilution of the MPO antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Myeloperoxidase was used as the immunogen for the MPO antibody.

Storage

Store the MPO antibody at -20oC.