



# Recombinant Human MPO (C-10His)

<b>Catalog #</b>	EPT086
<b>Expression Host</b>	Human Cells
<b>DESCRIPTION</b>	Recombinant Human Myeloperoxidase is produced by our Mammalian expression system and the target gene encoding Ala49-Ser745 is expressed with a 10His tag at the C-terminus.
<b>Accession</b>	P05164
<b>Synonyms</b>	Myeloperoxidase; MPO
<b>Mol Mass</b>	80.3 KDa
<b>AP Mol Mass</b>	85-95 KDa, reducing conditions
<b>Purity</b>	Greater than 95% as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Less than 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) as determined by LAL test.
<b>FORMULATION</b>	Lyophilized from a 0.2 $\mu$ m filtered solution of 20mM Tris-HCl, 150mM NaCl, pH 8.0.
<b>RECONSTITUTION</b>	Always centrifuge tubes before opening. Do not mix by vortex or pipetting.





It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/ml.

Dissolve the lyophilized protein in distilled water.

Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

## SHIPPING

The product is shipped at ambient temperature.

Upon receipt, store it immediately at the temperature listed below.

## STORAGE

Lyophilized protein should be stored at  $< -20^{\circ}\text{C}$ , though stable at room temperature for 3 weeks.

Reconstituted protein solution can be stored at 4-7 $^{\circ}\text{C}$  for 2-7 days.

Aliquots of reconstituted samples are stable at  $< -20^{\circ}\text{C}$  for 3 months.

## BACKGROUND

Myeloperoxidase (MPO) is a heme-containing enzyme belonging to the XPO subfamily of peroxidases. It is an abundant neutrophil and monocyte glycoprotein that catalyzes the hydrogen peroxide-dependent conversion of chloride, bromide, and iodide to multiple reactive species. Post-translational processing of MPO involves the insertion of a heme moiety and the proteolytic removal of both a





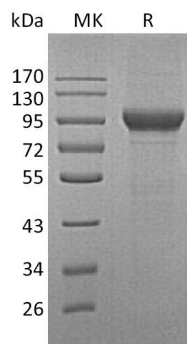
propeptide and a 6 aa internal peptide. This results in a disulfide-linked dimer composed of a 60 kDa heavy and 12 kDa light chain that associate into a 150 kDa enzymatically active tetramer. The tetramer contains two heme groups and one disulfide bond between the heavy chains. Alternate splicing generates two additional isoforms of MPO, one with a 32 aa insertion in the light chain, and another with a deletion of the signal sequence and part of the propeptide. Human and mouse MPO share 87% aa sequence identity. MPO activity results in protein nitrosylation and the formation of 3-chlorotyrosine and dityrosine crosslinks. MPO is also associated with a variety of other diseases, and inhibits vasodilation in inflammation by depleting the levels of NO. Serum albumin functions as a carrier protein during MPO movement to the basolateral side of epithelial cells. MPO is stored in neutrophil azurophilic granules. Upon cellular activation, it is deposited into pathogen-containing phagosomes.





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## SDS-PAGE



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