

32-8958: Recombinant Human Myeloperoxidase/MPO (C-10His)

Gene : MPO
Gene ID : 4353
Uniprot ID : P05164

Description

Source: Human Cells.
MW :80.3kD.

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. 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.

Product Info

Amount : 10 µg / 50 µg
Content : Lyophilized from a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH8.0 .
Storage condition : Lyophilized protein should be stored at -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at -20°C for 3 months.
Amino Acid : AAPAVLGEVDTSVLSSMEEAKQLVDKAYKERRESIKQRLRSGSASPMELLSYFKQPVAARTTAVRAADYLHVA
LDLLERKLRSLWRRPFNVTDVLTPAQLNVLSKSSGCAYQDVGVTCPDQDKYRTITGMCNRRSPTLGASNRAF
VRWLPAEYEDGFSLPYGWTPGVKRNFGPVALARAVSNEIVRFPDQLTPDQERSLMFMQWGQLLDHDLDFTP
EPAARASFVTGVNCEVSCVQPPCFPLKIPNDPRIKNQADCIPFFRSCPACPGSNITIRNQINALTSFVDASVMY
GSEELARNLRNMSNQLGLLAVNQRFQDNGRALLPFDNLHDDPCLLTNRSARIPCFLAGDTRSEMPELTSMH
TLLLREHNRLATELKS LNPRWDGERLYQEARKIVGAMVQIITYRDYLPVLGPTAMRKYLPTYRSYNDSDVPRIA
NVFTNAFRYGHHTLIQPFMFRLDNRYQPMENPRVPLSRVFFASWRVLEGGIDPILRGLMATPAKLNQRNQIAV
DEIRERLFEQVMRIGLDLPALNMQRSDHGLPGYNARRFCGLPQPETVGLGTVLRNLKLRKLMQYGTNP
NIDIWMGGVSEPLKRGVGPGLLACIIGTQFRKLRDGRFVWENEGVFSMQRQALAQISLPRIICDNTGITTV
SKNNIFMSNSYPRDFVNCSTLPALNLSWREASHHHHHHHHHH

Application Note

Endotoxin : Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test.