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3-Chlorotyrosine

National Cancer Institute

Source

National Cancer Institute. *3-Chlorotyrosine*. NCI Thesaurus. Code C103150.

A specific biomarker of hypochlorous acid (HClO), the oxidation product of myeloperoxidase (MPO). Under oxidative stress, 3-chlorotyrosine is produced in proteins with tyrosine residues by the strong oxidant HClO. HClO which is formed at sites of inflammation is also the anti-bacterial molecule produced by neutrophils through MPO-catalyzed oxidation. MPO is a heme-containing enzyme secreted by activated neutrophils and monocytes; it is the only enzyme that produces HClO. Therefore, 3-chlorotyrosine can potentially be used to help determine the extent of neutrophilic inflammation.