

Product datasheet

Myeloperoxidase (MPO) Activity Assay Kit (Fluorometric) ab111749

★★★★★ [1 Abreviews](#) [16 References](#) [2 Images](#)

Overview

Product name	Myeloperoxidase (MPO) Activity Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Cell culture supernatant, Tissue Extracts
Assay type	Enzyme activity
Sensitivity	> 0.0005 mU/well
Assay time	0h 30m
Species reactivity	Reacts with: Mammals, Other species
Product overview	Myeloperoxidase (MPO) Activity Assay Kit ab111749 provides a rapid, simple and reliable fluorometric assay to study MPO activity.

In the MPO assay protocol, MPO catalyzes the production of sodium hypochlorite (NaClO) from hydrogen peroxide (H₂O₂) and sodium chloride (NaCl). Subsequently, NaClO reacts stoichiometrically with the free radical sensor Aminophenyl fluorescein (APF) to generate fluorescein, whose fluorescence can be detected at Ex/Em = 485/525 nm.

This MPO assay kit can be used to detect MPO activity as low as 0.5 µU per well.

MPO assay protocol summary:

- add fluorescein standard to wells and analyze with a microplate reader
- add samples to wells
- add reaction mix
- analyze every 2-3 mins with a microplate reader in kinetic mode for at least 30 mins

Notes This product is manufactured by BioVision, an Abcam company and was previously called K745 Myeloperoxidase (MPO) Fluorometric Activity Assay Kit. K745-100 is the same size as the 100 test size of ab111749.

Platform Microplate reader

Properties

Storage instructions

Store at -20°C. Please refer to protocols.

Components	100 tests
Assay Buffer LVM	1 x 25ml
Fluorescence Standard IV	1 x 50µl
Hydrogen Peroxide Solution II	1 x 50µl
MPO Chlorination Probe	1 x 200µl
MPO Positive Control	1 vial

Function

Part of the host defense system of polymorphonuclear leukocytes. It is responsible for microbicidal activity against a wide range of organisms. In the stimulated PMN, MPO catalyzes the production of hypohalous acids, primarily hypochlorous acid in physiologic situations, and other toxic intermediates that greatly enhance PMN microbicidal activity.

Involvement in disease

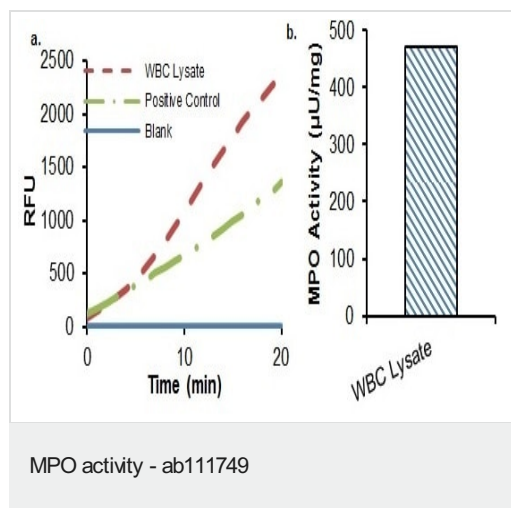
Defects in MPO are the cause of myeloperoxidase deficiency (MPD) [MIM:254600]. MPD is an autosomal recessive defect that results in disseminated candidiasis.

Sequence similarities

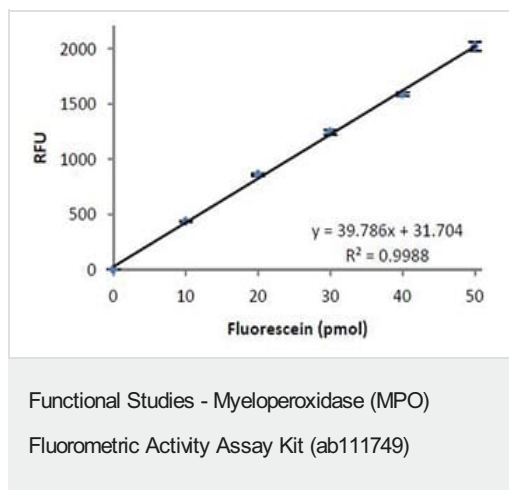
Belongs to the peroxidase family. XPO subfamily.

Cellular localization

Lysosome.

Images

a. Measurement of MPO activity in WBC lysate (0.1 µg) and MPO Positive Control (3 µL). b. MPO specific activity in WBC lysate.



Standard Curve using this kit protocol (Ex/Em = 485/525 nm)

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