

Myeloperoxidase (MPO) Activity Assay Kit (Colorimetric) ab105136

★★★★★ [3 Abreviews](#) [67 References](#) [画像数 3](#)

製品の概要

製品名	Myeloperoxidase (MPO) Activity Assay Kit (Colorimetric)
検出方法	Colorimetric
サンプルの種類	Cell culture supernatant, Urine, Serum, Other biological fluids, Tissue Homogenate
アッセイタイプ	Enzyme activity
全工程の試験時間	1h 00m
種交差性	交差種: Mammals, Other species
製品の概要	Myeloperoxidase (MPO) Activity Assay Kit ab105136 is a rapid, simple, sensitive, and reliable colorimetric assay suitable for use as a high throughput MPO activity assay.

In the MPO assay protocol, myeloperoxidase produces HClO from H₂O₂ and Cl⁻. The HClO reacts with taurine to generate the taurine chloramine, which subsequently reacts with the DTNB probe to eliminate color (absorbance at 412 nm). The absorbance is inversely proportional to the amount of MPO enzyme.

This MPO assay kit can be used to detect myeloperoxidase as low as 0.05 mU per well.

MPO assay protocol summary:

- add samples to wells (and assay buffer only to wells for standards)
- add reaction mix to sample wells and incubate for 30 min to 2 hrs
- add stop mix and incubate for 10 min
- add TNB reagent/standard to all wells and incubate for 5-10 min
- analyze with a microplate reader

特記事項

This product is manufactured by BioVision, an Abcam company and was previously called K744 Myeloperoxidase (MPO) Colorimetric Activity Assay Kit. K744-100 is the same size as the 100 test size of ab105136.

Myeloperoxidase (MPO) is a peroxidase enzyme (EC 1.11.1.7) most abundantly expressed in neutrophil granulocytes. It is a lysosomal protein stored in the azurophilic granules of the neutrophil. Myeloperoxidase contains a heme pigment which causes its green color in secretions rich in neutrophils, such as pus and some forms of mucus. Myeloperoxidase catalyzes the production of hypochlorous acid (HClO) from hydrogen peroxide (H₂O₂) and chloride anion (Cl⁻, or the equivalent from a non-chlorine halide). Myeloperoxidase also oxidizes tyrosine to a tyrosyl

radical using hydrogen peroxide as an oxidizing agent.

試験プラットフォーム

Microplate reader

製品の特性

保存方法

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

内容	100 tests
DTNB Probe	1 x 50µl
MPO Assay Buffer II	1 x 25ml
MPO Positive Control	1 vial
Hydrogen Peroxide Solution II	1 x 50µl
Stop Mix	1 x 20µl
TCEP	1 x 50µl

機能

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.

関連疾患

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

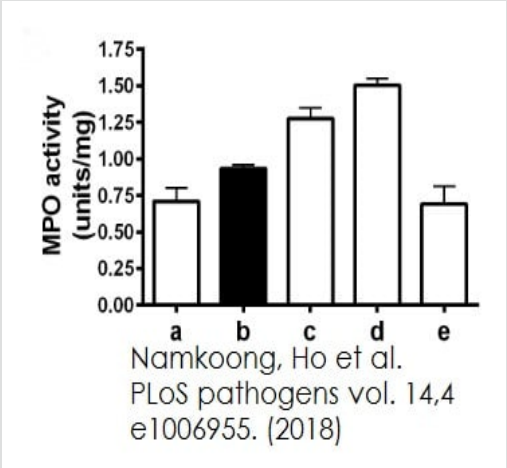
配列類似性

Belongs to the peroxidase family. XPO subfamily.

細胞内局在

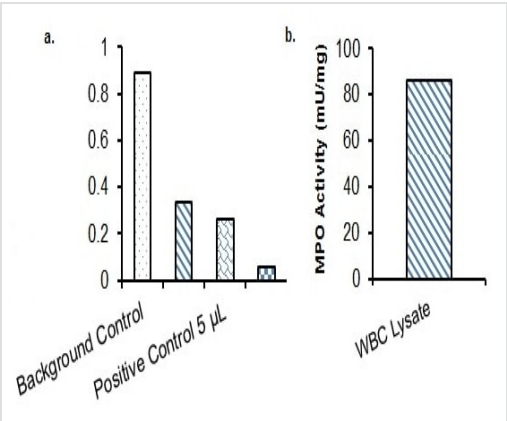
Lysosome.

画像



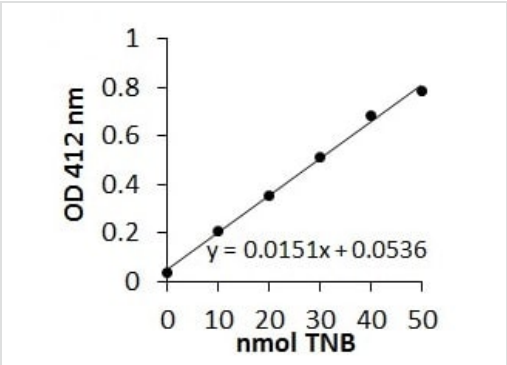
MPO activity in indicated cells was measured using the commercially available MPO Activity Assay Kit (n = 3).

Functional Studies - Myeloperoxidase (MPO)
Activity Assay Kit (Colorimetric) (ab105136)
Namkoong, Ho et al., PLoS pathogens vol. 14,4
e1006955., S4 fig, doi:10.1371/journal.ppat.1006955



a. Measurement of MPO activity using WBC lysate (3 µg) and MPO Positive Control (5 and 10 µL). b. MPO specific activity in WBC lysate.

MPO activity



Typical standard curve for ab105136.

Typical Standard Curve

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