Datasheet for ABIN411400

Myeloperoxidase ELISA Kit

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Overview

Quantity:	96 tests
Target:	Myeloperoxidase (MPO)
Binding Specificity:	AA 49-745
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	312-20000 pg/mL
Minimum Detection Limit:	312 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human MPO
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Cell Lysate, Tissue Homogenate, Serum, Plasma (heparin), Plasma (EDTA), Saliva, Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: A49-S745
Specificity:	Expression system for standard: NSO Immunogen sequence: A49-S745

Product Details

Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	Myeloperoxidase (MPO)
Alternative Name:	MPO (MPO Products)
Background:	Protein 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. Background: Myeloperoxidase(MPO) is a mammalian phagocyte hemoprotein thought to primarily mediate host defense reactions. It is abundantly expressed in neutrophils and secreted during their activation. Myeloperoxidase is part of the host defense system of human polymorphonuclear leukocytes, responsible for microbicidal activity against a wide range of organisms. It is located in the nucleus as well as in the cytoplasm. Intranuclear MPO may help to protect DNA against damage resulting from oxygen radicals produced during myeloid cell maturation and function. The standard product used in this kit is the product of gene recombination, consisting of 697(A49-S745) amino acids with the molecular mass of 80KDa. Synonyms: Myeloperoxidase,MPO,1.11.2.2,Myeloperoxidase,89 kDa myeloperoxidase,84 kDa myeloperoxidase,Myeloperoxidase light chain,Myeloperoxidase heavy chain,MPO, Full Gene Name: Myeloperoxidase Cellular Localisation: Lysosome.
Gene ID:	4353
UniProt:	P05164
Pathways:	Chromatin Binding

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well

Application Details

	assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the peroxidase family. XPO subfamily.
Plate:	Pre-coated
Protocol:	human MPO ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for MPO has been precoated onto 96-well plates. Standards(NSO, A49-S745) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MPO is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human MPO amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 20000pg/mL, 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL human MPO standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, cell lysate, tissue lysate, serum, plasma(heparin, EDTA), saliva or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human MPO standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 2.3, Standard deviation: 0.076, CV(%): 3.3 • Sample 2: n=16, Mean(ng/ml): 7.4, Standard deviation: 0.4, CV(%): 5.4 • Sample 3: n=16, Mean(ng/ml): 12.4, Standard deviation: 0.72, CV(%): 5.8, • Sample 1: n=24, Mean(ng/ml): 2.9, Standard deviation: 0.122, CV(%): 4.2 • Sample 2: n=24, Mean(ng/ml): 8, Standard deviation: 0.488, CV(%): 6.1 • Sample 3: n=24, Mean(ng/ml): 14.7, Standard deviation: 0.956, CV(%): 6.5
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

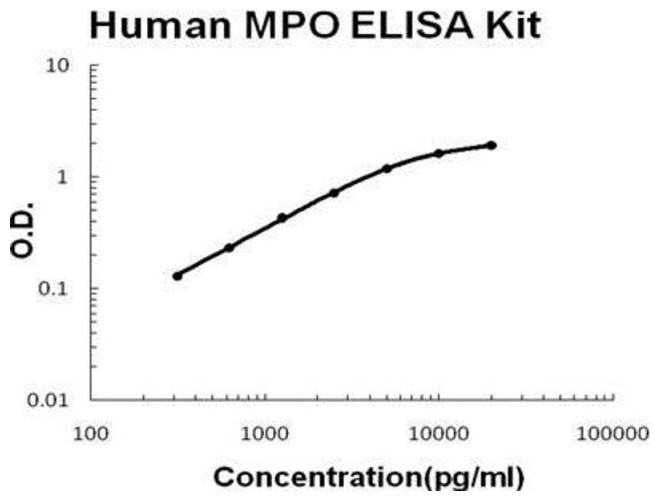
Product cited in:

Fernández, Baldassarro, Sivilia, Giardino, Calzà: "Inflammation severely alters thyroid hormone signaling in the central nervous system during experimental allergic encephalomyelitis in rat: Direct impact on OPCs differentiation failure." in: **Glia**, Vol. 64, Issue 9, pp. 1573-89, (2016) (PubMed).

Vidart, Wajner, Leite, Manica, Schaan, Larsen, Maia: "N-acetylcysteine administration prevents nonthyroidal illness syndrome in patients with acute myocardial infarction: a randomized clinical trial." in: **The Journal of clinical endocrinology and metabolism**, Vol. 99, Issue 12, pp. 4537-45, (2014) (PubMed).

There are more publications referencing this product on: Product page

Images



ELISA

Image 1. Human MPO PicoKine ELISA Kit standard curve