Product Information Sheet

Human Myeloperoxidase / MPO ELISA Kit

Catalog No. EK0850

Size 96T

Range 0.312ng/ml-20ng/ml

Sensitivity < 10 pg/ml

Specificity

No detectable cross-reactivity with any other cytokine.

Storage

Store at 4℃ for frequent use, at -20℃ for infrequent use.

Avoid multiple freeze-thaw cycles (Shipped with wet ice.)

Expiration

Four months at 4℃ and eight months at -20℃.

Application

For quantitative detection of human MPO in sera, body fluids, tissue lysates or cell culture supernates.

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Principle

Human MPO ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human MPO specific-specific polyclonal antibodies were precoated onto 96-well plates. The human specific detection polyclonal antibodies were biotinylated. The test samples and biotinylated detection antibodies were added to the wells 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.

Kit Components

1. Lyophilized recombinant human MPO standard: 20ng/tube×2.
2. One 96-well plate precoated with anti- human MPO antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human MPO antibody : 130µl, dilution 1:100.
5. Antibody diluent buffer: 12ml.
6. Avidin-Biotin-Peroxidase Complex (ABC) : 130µl,dilution 1:100.
7. ABC diluent buffer: 12ml.
8. TMB color developing agent: 10ml.
9. TMB stop solution: 10ml.

Material Required But Not Provided

1. Microplate reader in standard size and Automated plate washer.
2. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended if there is a large amount of samples.
3. Clean tubes and Eppendorf tubes.
4. Washing buffer (neutral PBS or TBS).

   Preparation of 0.01M **TBS:** Add 1.2g Tris, 8.5g NaCl; 450µl of purified acetic acid or 700µl of concentrated hydrochloric acid to 1000ml H_2O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

   Preparation of 0.01 M **PBS:** Add 8.5g sodium chloride, 1.4g Na_2HPO_4 and 0.2g NaH_2PO_4 to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

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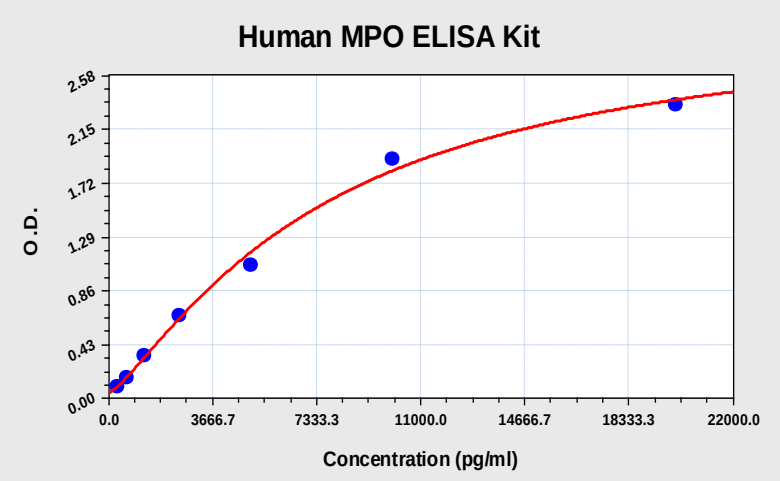
Notice for Application of Kit

1. Before using Kit, spin tubes and bring down all components to bottom of tube.
2. Duplicate well assay was recommended for both standard and sample testing.
3. Don't let 96-well plate dry, dry plate will inactivate active components on plate.
4. In order to avoid marginal effect of plate incubation due to temperature difference (reaction may be stronger in the marginal wells), it is suggested that the diluted ABC and TMB solution will be pre-warmed in 37℃ for 30 min before using.

Human MPO ELISA Kit-1X96 Well Plate Image



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.

Reference

1. Klebanoff, S. J. : Myeloperoxidase. *Proc. Assoc. Am. Phys.* 111: 383-389, 1999.
2. Murao, S.-I.; Stevens, F. J.; Ito, A.; Huberman, E. : Myeloperoxidase: a myeloid cell nuclear antigen with DNA-binding properties. *Proc. Nat. Acad. Sci.* 85: 1232-1236, 1988.
3. Nauseef, W. M.; Olsson, I.; Arnljots, K. : Biosynthesis and processing of myeloperoxidase--a marker for myeloid cell differentiation. *Europ. J. Haemat.* 40: 97-110, 1988.