



Product Information Sheet

Mouse MDC (macrophage-derived chemokine) ELISA Kit

Catalog No.	EK0447
Size	96T
Range	15.6pg/ml-1000pg/ml.
Sensitivity	< 1pg/ml

Specificity

No detectable cross-reactivity with any other cytokine.

Storage

Store at 4°C for frequent use, at -20°C for infrequent use.

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

Expiration

Four months at 4°C and eight months at -20°C.

Application

For quantitative detection of mouse MDC in sera, plasma, body fluids, tissue lysates or cell culture supernates.

Principle

Mouse MDC ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Mouse MDC specific-specific monoclonal antibodies were precoated onto 96-well plates. The mouse 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 mouse MDC amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant mouse MDC standard: 10ng/tubex2.
2. One 96-well plate precoated with anti- mouse MDC antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- mouse MDC 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 in the condition of large amount of samples in the detection.
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 H₂O 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 Na₂HPO₄ and 0.2g NaH₂PO₄ to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

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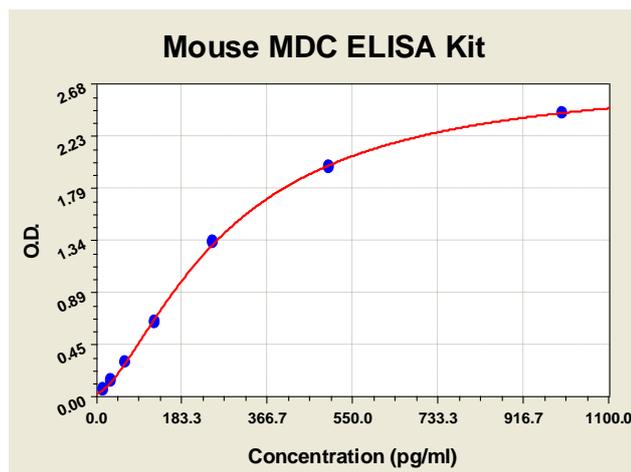
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Notice for Application of Kit

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°C for 30 min before using.

Mouse MDC ELISA Kit-1X96 Well Plate Image



Background

Macrophage-derived chemokine (MDC), also called Chemokine, cc motif, ligand 22 (CCL22) or Small inducible cytokine subfamily A, member 22 (SCY22). MDC is a recently identified member of the CC chemokine family. It is not closely related to other chemokines, sharing most similarity with thymus- and activation-regulated chemokine (TARC), which contains 37% identical amino acids. In addition, MDC gene is mapped to chromosome 16q13, the same position reported for the TARC gene.¹ MDC has the four-cysteine motif and other highly conserved residues characteristic of CC chemokines, but it shares <35% identity with any of the known chemokines. Recombinant MDC was expressed in Chinese hamster ovary cells and purified by heparin-Sepharose chromatography. MDC is highly expressed in macrophages and in monocyte-derived dendritic cells, but not in monocytes, natural killer cells, or several cell lines of epithelial, endothelial, or fibroblast origin. High expression was also detected in normal thymus and less expression in lung and spleen. MDC is thus a unique member of the CC chemokine family that may play a fundamental role in the function of dendritic cells, natural killer cells, and monocytes.²

Reference

1. Imai, T.; Chantry, D.; Raport, C. J.; Woods, C. L.; Nishimura, M.; Godiska, R.; Yoshie, O.; Gray, P. W. : Macrophage-derived chemokine is a functional ligand for the CC chemokine receptor 4. *J. Biol. Chem.* 273: 1764-1768, 1998.
2. Godiska, R.; Chantry, D.; Raport, C. J.; Sozzani, S.; Allavena, P.; Leviten, D.; Mantovani, A.; Gray, P. W. : Human macrophage-derived chemokine (MDC), a novel chemoattractant for monocytes, monocyte-derived dendritic cells, and natural killer cells. *J. Exp. Med.* 185: 1595-1604, 1997.

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