Product Information Sheet

Mouse MCP-1 ELISA Kit

Catalog No. EK0568

Size 96T

Range 15.6pg/ml-1000pg/ml

Sensitivity < 0.5pg/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 mouse MCP-1 in sera, plasma, body fluids, tissue lysates or cell culture supernates.

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Principle

Mouse MCP-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Mouse MCP-1specific-specific polyclonal 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 MCP-1 amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant mouse MCP-1 standard: 10ng/tube×2.
2. One 96-well plate precoated with anti- mouse MCP-1 antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- mouse MCP-1 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.
2. Automated plate washer.
3. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection.
4. Clean tubes and Eppendorf tubes.
5. 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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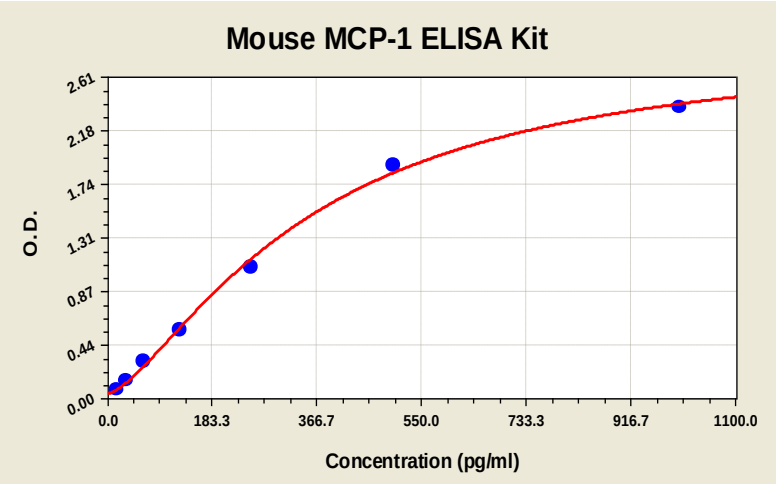
Notice for Application of Kit

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.

Mouse MCO-1 ELISA Kit-1X96 Well Plate Image



Background

Monocyte chemotactic protein-1 (MCP-1) is a member of the small inducible gene (SIG) family. It has been shown to play a role in the recruitment of monocytes to sites of injury and infection. By analysis of a panel of somatic cell hybrids, we have localized the MCP-1 gene, designated SCYA2, to human chromosome 17. In situ hybridization confirmed this assignment and further localized the gene to 17q11.2-q21.1.[1] MCP-1 plays a unique and crucial role in the initiation of atherosclerosis and may provide a new therapeutic target in this disorder.[2] Monocyte chemoattractant protein-1 (MCP-1), regulated on activation, normal T cell expressed and secreted,and stimulation of monocytes from healthy carriers of the genotype GG with Mycobacterium tuberculosis antigens yielded higher MCP-1.[3] The standard used in this kit is recombinant mouse MCP-1(Q24-R96) with the molecular mass of 8.5Kda.

Reference

1. Mehrabian, M., Sparkes, R. S., Mohandas, T., Fogelman, A. M., Lusis, A. J. Localization of monocyte chemotactic protein-1 gene (SCYA2) to human chromosome 17q11.2-q21.1. Genomics 9: 200-203, 1991.
2. Gu, L., Okaka, Y., Clinton, S. K., Gerard, C., Sukhova, G. K., Libby, P., Rollins, B. J. Absence of monocyte chemoattractant protein-1 reduces atherosclerosis in low density lipoprotein receptor-deficient mice. Molec. Cell 2: 275-281, 1998.
3. Flores-Villanueva, P. O., Ruiz-Morales, J. A., Song, C.-H., Flores, L. M., Jo, E.-K., Montano, M., Barnes, P. F., Selman, M., Granados, J. A functional promoter polymorphism in monocyte chemoattractant protein-1 is associated with increased susceptibility to pulmonary tuberculosis. J. Exp. Med. 202: 1649-1658, 2005.