Product Information Sheet

Human M-CSF ELISA Kit

Catalog No. EK0444

Size 96T

Range 15.6pg/ml-1000pg/ml

Sensitivity < 1 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 M-CSF in sera, plasma, body fluids, tissue lysates or cell culture supernates.

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Principle

Human M-CSF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human M-CSF specific polyclonal antibody was precoated onto 96-well plates. The human M-CSF specific detection polyclonal antibody was biotinylated. The test samples and biotinylated detection antibodies were added to the wells subsequently and then followed by washing with TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with 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 M-CSF amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant human M-CSF standard: 10ng/tube×2.
2. One 96-well plate precoated with anti- human M-CSF antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human M-CSF 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 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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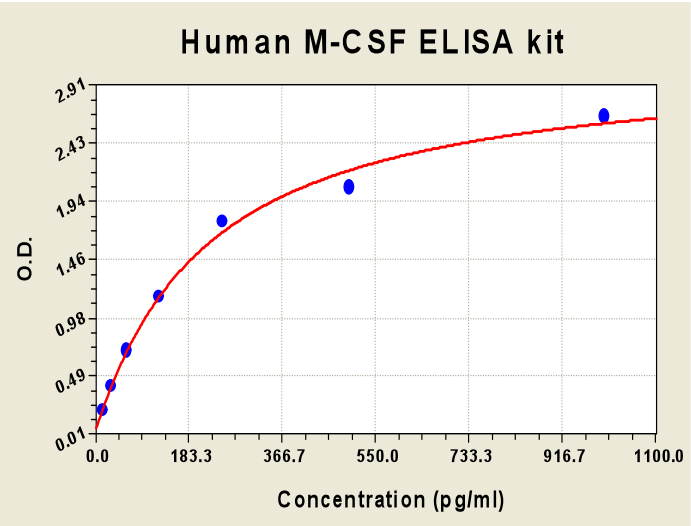
Notice for Application of Kit

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 M-CSF ELISA Kit-1X96 Well Plate Image



Background

M-CSF, also called CSF1, has a role in development of the placenta. Uterine CSF1 concentration is regulated by a synergistic action of estradiol and progesterone. CSF1 is produced by uterine glandular epithelial cells. It had been found that FMS, the CSF1 receptor, is expressed in placenta and choriocarcinoma cell lines[1]. The CSF1 gene is mapped to 1p21-p13 and contains 10 exons and 9 introns spanning 20 kb[2]. And there are 2 forms of CSF1, with 224 and 522 amino acids, resulting from alternative splicing[3].

Reference

1. Pollard, J. W.; Bartocci, A.; Arceci, R.; Orlofsky, A.; Ladner, M. B.; Stanley, E. R. : Apparent role of the macrophage growth factor, CSF-1, in placental development. *Nature* 330: 484-486, 1987.
2. Ladner, M. B.; Martin, G. A.; Noble, J. A.; Nikoloff, D. M.; Tal, R.; Kawasaki, E. S.; White, T. J. : Human CSF-1: gene structure and alternative splicing of mRNA precursors. *EMBO J.* 6: 2693-2698, 1987.
3. Ladner, M. B.; Martin, G. A.; Noble, J. A.; Nikoloff, D. M.; Tal, R.; Kawasaki, E. S.; White, T. J. : Human CSF-1: gene structure and alternative splicing of mRNA precursors. *EMBO J.* 6: 2693-2698, 1987.