Human Cystatin C ELISA Kit

**Catalog No.** GWB-ZZD155

**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°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 human Cystatin C in sera, plasma, body fluids, tissue lysates or cell culture supernates.

**Principle**
GenWay’s human Cystatin C ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human Cystatin C 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 Cystatin C amount of sample captured in plate.

**Kit Components**
1. Lyophilized recombinant human Cystatin C standard: 20ng/tube×2.
2. One 96-well plate precoated with anti-human Cystatin C antibody.
3. Sample diluent buffer: 30 ml
5. Antibody diluent buffer: 12ml.
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 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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FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC AND CLINICAL USE.
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.

Human Cystatin C ELISA Kit-1X96 Well Plate Image

Background

Cystatin C or cystatin 3 (formerly gamma trace, post-gamma-globulin or neuroendocrine basic polypeptide), a protein encoded by the CST3 gene, was originally described as a constituent of normal cerebrospinal fluid (CSF) and of urine from patients with renal failure. Cystatin 3 has a low molecular weight (approximately 13.3 kilodaltons), and it is removed from the bloodstream by glomerular filtration in the kidneys. In humans, all cells with a nucleus (cell core containing the DNA) produce cystatin C as a chain of 120 amino acids. It is found in virtually all tissues and bodily fluids. Cystatin C, which belongs to the type II cystatin gene family, is a potent inhibitor of lysosomal proteinases (enzymes from a special subunit of the cell that break down proteins) and probably one of the most important extracellular inhibitors of cysteine proteases (it prevents the breakdown of proteins outside the cell by a specific type of protein degrading enzymes). Moreover, cystatin C is involved in network reorganization in the epileptic dentate gyrus.

The standard product used in this kit is recombinant human Cystatin C, consisting of 120 amino acids with the molecular mass of 15KDa.

Reference