Product Information Sheet

Human IL-8 ELISA Kit

Catalog No. EK0413

Size 96T

Range

15.6pg/ml-1000pg/ml
(body fluids, tissue lysates or cell culture supernates)
7.8pg/ml-500pg/ml
(human sera, plasma).

Sensitivity < 1pg/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 IL-2 in sera, plasma, body fluids, tissue lysates or cell culture supernates.

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Principle

Human IL-8 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human IL-8 specific-specific monoclonal antibodies were precoated onto 96-well plates. The human specific detection monoclonal 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 IL-8 amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant human IL-8 standard: 10ng/tube×2.
2. One 96-well plate precoated with anti- human IL-8 antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human IL-8 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.

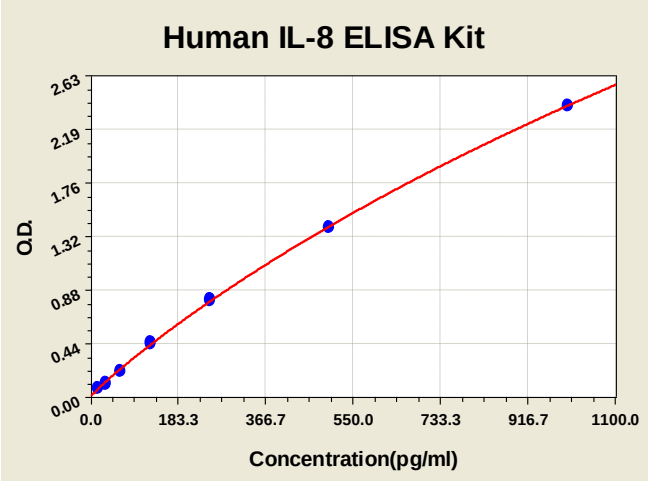
   Preparation of 0.01 M **PBS:** Add 8.5g sodium chloride, 1.4g Na_2HPO_4 and 0.2g NaH_2PO_4 to 1000ml distilled water and adjust pH to 7.2-7.6.

Finally, adjust the total volume to 1L.

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 IL-8 ELISA Kit-1X96 Well Plate Image



Background

Interleukin-8, also called neutrophil-activating peptide-1 or SCYB8, is a tissue-derived peptide secreted by several types of cells in response to inflammatory stimuli. Monocyte-derived neutrophil chemotactic factor (MDNCF/IL-8, suggested gene symbol IL8) is a cytokine that chemoattracts and activates neutrophils.[1] IL-8 is produced and released from human adipose tissue and from isolated adipocytes in vitro, which may indicate that IL-8 from adipose tissue could be involved in some of the obesity-related complications.[2] The MDNCF/IL-8 gene is placed on the human gene map at position 4q12-q21. This is the same location where at least three other members (platelet factor 4, melanoma growth stimulatory activity, and interferon-gamma induced factor) of the platelet factor 4 gene superfamily reside.[1] Human IL-8 consists of 99 amino acids in precursor form and 79 amino acids in mature form.

Reference

1. Modi, W. S.; Dean, M.; Seuanez, H. N.; Mukaida, N.; Matsushima, K.; O'Brien, S. J. Monocyte-derived neutrophil chemotactic factor (MDNCF/IL-8) resides in a gene cluster along with several other members of the platelet factor 4 gene superfamily. *Hum. Genet.* 84: 185-187, 1990.
2. Bruun, J. M.; Pedersen, S. B.; Richelsen, B. Regulation of interleukin 8 production and gene expression in human adipose tissue in vitro. *J. Clin. Endocr. Metab.* 86: 1267-1273, 2001.