

Human Activin A ELISA Kit

Catalog No.	EK0301
Size	96T
Range	62.5pg/ml-4000pg/ml
Sensitivity	< 12pg/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 Activin A in serum, body fluids, tissue lysates or cell culture supernates.

Principle

Boster's human Activin A ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human Activin A 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 Activin A amount of sample captured in plate.

Kit Components

1. Lyophilized recombinant human Activin A standard: 10ng/tubex2.
2. One 96-well plate precoated with anti- human Activin A antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human Activin A 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 H₂O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

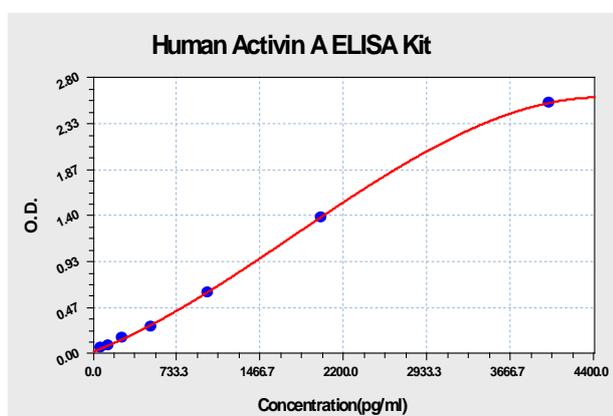
Preparation of 0.01 M **PBS**: Add 8.5g sodium chloride, 1.4g Na₂HPO₄ and 0.2g NaH₂PO₄ to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

Product Information Sheet

Notice for Application of Kit

1. To inspect the validity of experiment operation and the appropriateness of sample dilution proportion, pilot experiment using standards and a small number of samples is recommended.
2. The TMB Color Developing agent is colorless and transparent before using, contact us freely if it is not the case.
3. Before using the Kit, spin tubes and bring down all components to the bottom of tubes.
4. Duplicate well assay is recommended for both standard and sample testing.
5. Don't let 96-well plate dry, for dry plate will inactivate active components on plate.
6. Don't reuse tips and tubes to avoid cross contamination.
7. To avoid to use the reagents from different batches together.
8. 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 Activin A ELISA Kit-1X96 Well Plate Image



Background

Activin A is a homodimer of 14kDa beta-A. Activin A, a cytokine member of the transforming growth factor-beta superfamily, is expressed locally by the mesenchymal component of the hemopoietic microenvironment. Its expression is regulated on the mRNA level by different cytokines, and the biological activity of the protein is tightly controlled by several inhibitory molecules.¹ Inhibins and activins are members of the transforming growth factor beta superfamily and are known to modulate the growth and differentiation of several cell types.² Inhibins and activins inhibit and activate, respectively, the secretion of follitropin by the pituitary gland. Inhibins/activins are involved in regulating a number of diverse functions such as hypothalamic and pituitary hormone secretion, gonadal hormone secretion, germ cell development and maturation, erythroid differentiation, insulin secretion, nerve cell survival, embryonic axial development or bone growth, depending on their subunit composition. Inhibins appear to oppose the functions of activins. The standard product used in this kit is recombinant Activin A, which is composed of two single chains of 116 amino acids with the molecular mass of 26KDa.

Reference

1. Shav-Tal, Y.; Zipori, D. The role of activin a in regulation of hemopoiesis. *Stem Cells*. 2002;20(6):493-500.
2. Di, Loreto, C.; Reis, FM.; Cataldi, P.; Zuiani, C.; Luisi, S.; Beltrami, CA.; Petraglia, F. Human mammary gland and breast carcinoma contain immunoreactive inhibin/activin subunits: evidence for a secretion into cystic fluid. *Eur J Endocrinol*. 1999 Aug;141(2):190-4.