Product Information Sheet

# Human FGF9 ELISA Kit

**Catalog No.** EK0348

**Size** 96T

**Range** 62.5pg/ml-4000pg/ml

**Sensitivity** < 15pg/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 FGF9 in sera, plasma, body fluids, tissue lysates or cell culture supernates.

**To reorder contact us at:**

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## *Principle*

Human FGF9 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human FGF9 specific-specific monoclonal 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 FGF9 amount of sample captured in plate.

### *Kit Components*

1. Lyophilized recombinant human FGF9 standard: 10ng/tube×2.
2. One 96-well plate precoated with anti- human FGF9 antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human FGF9 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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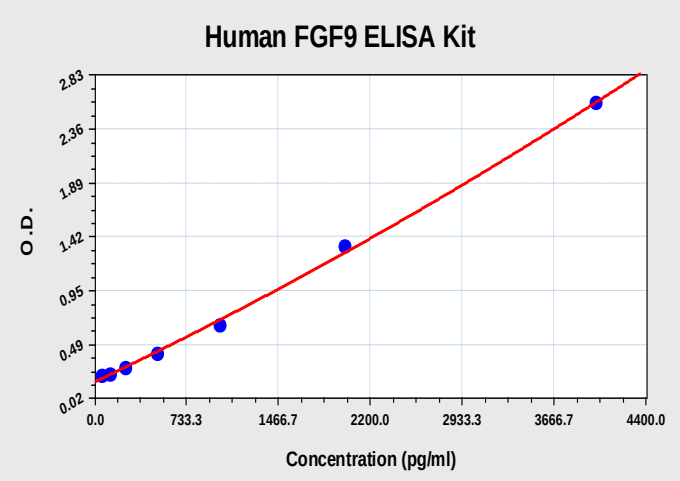
## *Notice for Application of Kit*

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.

## *Human FGF9 ELISA Kit-1X96 Well Plate Image*




## *Background*

Fibroblast growth factor-9 (FGF-9) is a steroid-regulated mitogen and survival factor for nerve and mesenchymal cells.[1] The human FGF-9 cDNA cloned by using oligonucleotide probes encodes a polypeptide consisting of 208 amino acids. Sequence similarity to other members of the FGF family has been estimated to be around 30%.[2] FGF-9 is an autocrine estromedin endometrial stromal growth factor that plays roles in cyclic proliferation of uterine endometrial stroma.[3] FGF9 is produced and secreted by the prostatic stromal cells. It is a potent mitogen for both prostatic epithelial and stromal cells in culture. FGF9 is an abundant secreted growth factor that can act as both a paracrine mitogen for epithelial cells and an autocrine mitogen for stromal cells. Overexpression of this paracrine and autocrine growth factor may play an important role in the epithelial and stromal proliferation in benign prostatic hyperplasia.[4] The standard product used in this kit is recombinant human FGF9, consisting of 208 amino acids with the molecular mass of 23KDa. As a result of glycosylation, the molecular mass is 25-27KDa.

## *Reference*


1. Wing LY, Chuang PC, Wu MH, Chen HM, Tsai SJ. Expression and mitogenic effect of fibroblast growth factor-9 in human endometriotic implant is regulated by aberrant production of estrogen. J Clin Endocrinol Metab. 2003 Nov;88(11):5547-54.
2. Miyamoto, M.; Naruo, K.-I.; Seko, C.; Matsumoto, S.; Kondo, T.; Kurokawa, T. Molecular cloning of a novel cytokine cDNA encoding the ninth member of the fibroblast growth factor family, which has a unique secretion property. *Molec. Cell. Biol.* 13: 4251-4259, 1993.
3. Tsai SJ, Wu MH, Chen HM, Chuang PC, Wing LY. Fibroblast growth factor-9 is an endometrial stromal growth factor. Endocrinology. 2002 Jul;143(7):2715-21.
4. Giri D, Ropiquet F, Ittmann M. FGF9 is an autocrine and paracrine prostatic growth factor expressed by prostatic stromal cells. J Cell Physiol. 1999 Jul;180(1):53-60.