

APA746Ra01 100µg
Active Fibroblast Growth Factor 23 (FGF23)
Organism Species: *Rattus norvegicus* (Rat)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Tyr25~Val251

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 10.0

Predicted Molecular Mass: 29.1kDa

Accurate Molecular Mass: 29kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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YSDTSPLLGSNWGSLTHLYTATARNSYHLQIHRDGHVDGTPHQTIYSALMITSEDAGSVVIGAMTRRFLCMDLRGNIFGSYHFSPEN  
CRFRQWTLNGYDVYLSPKHHYLVSLGRSKRIFQPGTNPPPFSSQFLARRNEVPLLHFYTARPRRHTRS AEDPPERDPLNLVKPRPRAT  
PIPVSCSRELP SAEEGGPAASDPLGLVLRGRGDARRGAGGTDRCPFPFRFV
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[ACTIVITY]

Fibroblast growth factor 23 or FGF23 is a member of the fibroblast growth factor (FGF) family which is responsible for phosphate and vitamin D metabolism. The main function of FGF23 seems to be regulation of phosphate concentration in plasma. FGF23 decreases the reabsorption and increases excretion of phosphate and suppress 1-alpha-hydroxylase, reducing its ability to activate vitamin D and subsequently impairing calcium absorption. Besides, Fibroblast Growth Factor Receptor 4 (FGFR4) has been identified as an interactor of FGF23, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat FGF23 and recombinant rat FGFR4. Briefly, FGF23 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µl were then transferred to FGFR4-coated microtiter wells and incubated for 2h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-FGF23 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of FGF23 and FGFR4 was shown in Figure 1, and this effect was in a dose dependent manner.

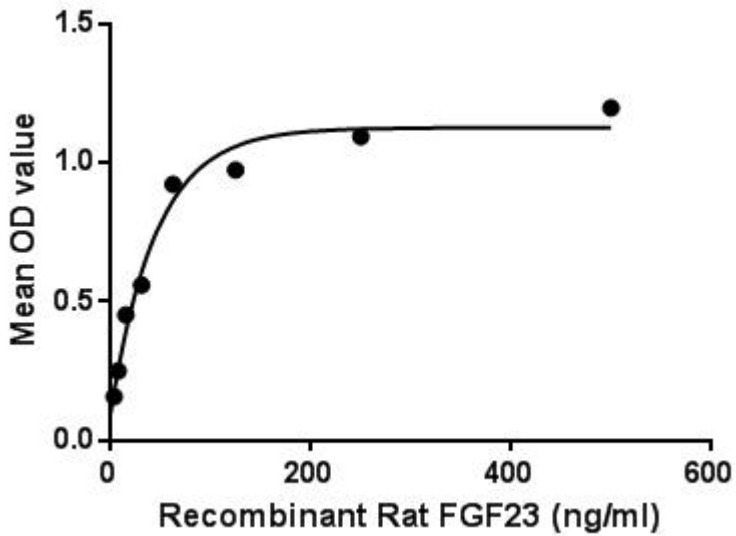


Figure 1. The binding activity of FGF23 with FGFR4

[IDENTIFICATION]

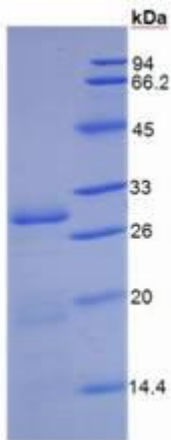


Figure 2. SDS-PAGE

Sample: Active recombinant FGF23, Rat

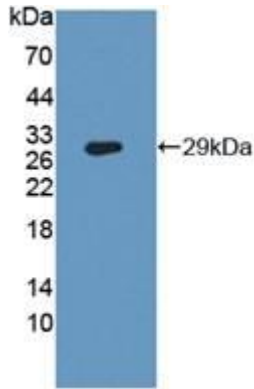


Figure 3. Western Blot

Sample: Recombinant FGF23, Rat;

Antibody: Rabbit Anti-Rat FGF23 Ab (PAA746Ra01)

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.