

APA746Mu03 100µg
Active Fibroblast Growth Factor 23 (FGF23)
Organism Species: Mus musculus (Mouse)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Tyr25~Val251

Tags: N-terminal His-tag

Purity: >92%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 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: 9.8

Predicted Molecular Mass: 28.7kDa

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

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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]

YPDTSP LLGSNWGSLT HLYTATARTS
YHLQIHRDGH VDGTPHQTIY SALMITSEDA GSVVITGAMT RRFLCMDLHG
NIFGSLHFSP ENCKFRQWTL ENGYDVYLSQ KHHYLVSLGR AKRIFQPGTN
PPFSQFLAR RNEVPLLHFY TVRPRRHTRS AEDPPERDPL NVLKPRPRAT
PVPVSCSREL PSAEEGGPAA SDPLGVLRRG RGDARGGAGG ADRCRPFPRF
V

[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 1 (FGFR1) has been identified as an interactor of FGF23, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse FGF23 and recombinant human FGFR1. Briefly, FGF23 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to FGFR1-coated microtiter wells and incubated for 1h 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 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µL stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant mouse FGF23 and recombinant

human FGFR1 was shown in Figure 1, the EC50 for this effect is 0.17 ug/mL.

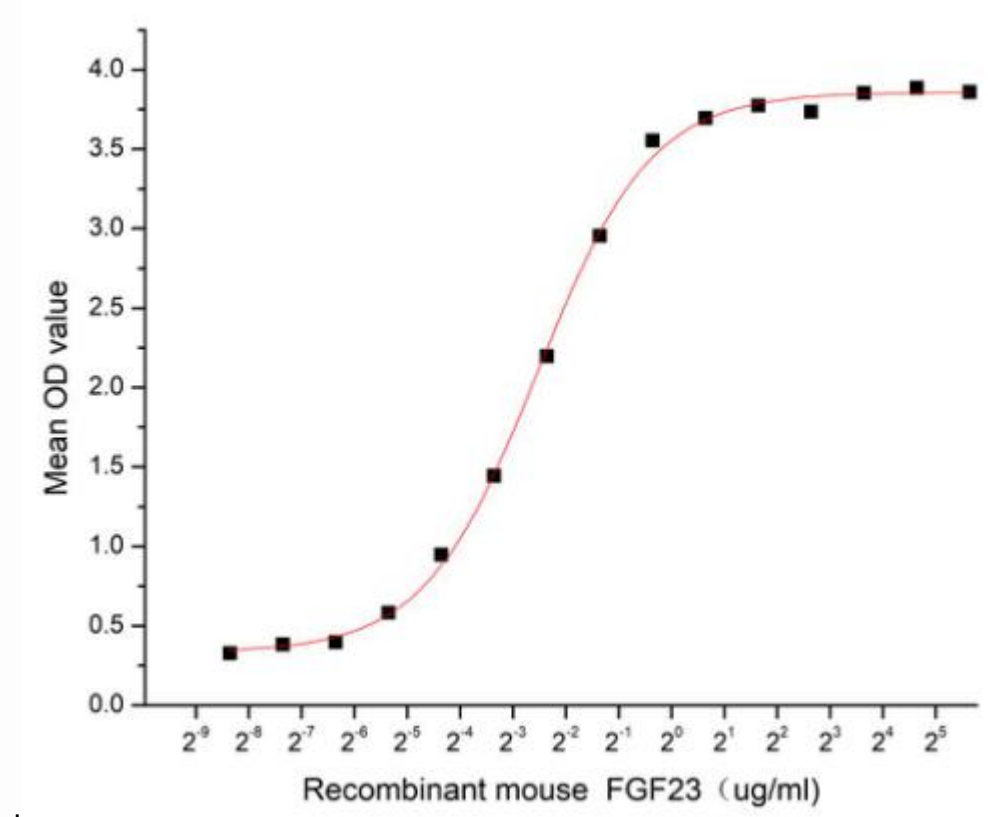


Figure 1. The binding activity of recombinant mouse FGF23 and recombinant human FGFR1

[IDENTIFICATION]

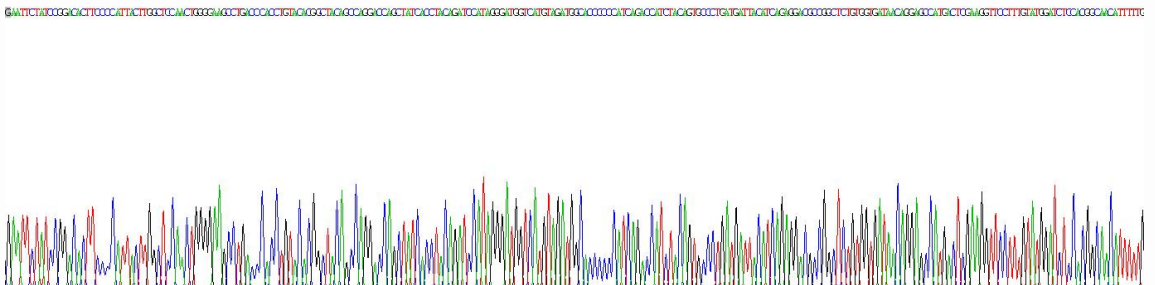


Figure 2. Gene Sequencing (extract)

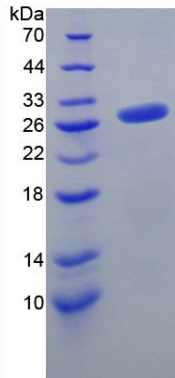


Figure 3. SDS-PAGE

Sample: Active recombinant FGF23, Mouse

[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.