

APA636Hu02 100µg

Active Fibroblast Growth Factor 7 (FGF7)

Organism Species: *Homo sapiens* (Human)

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: Cys32~Thr194

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% Sarcosyl, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

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

Predicted isoelectric point: 9.5

Predicted Molecular Mass: 21.5kDa

Accurate Molecular Mass: 23kDa 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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CNDMTPEQM ATNVNCSSPE
RHTRSVDYME GGDIVRRLF CRTQWYLRI KRGKVKGTQE MKNNYNIMEI
RTVAVGIVAI KGVSEFYLA MNKEGKLYAK KECNEDCNFK ELILENHNT
YASAKWTHNG GEMFVALNQK GIPVRGKTK KEQKTAHFLP MAIT
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[ACTIVITY]

Fibroblast Growth Factor 7 (FGF7), also known as Keratinocyte Growth Factor (KGF), is a paracrine signaling protein that belongs to the FGF family. It primarily targets epithelial cells and plays crucial roles in wound healing, tissue repair, and embryonic development. FGF7 binds specifically to the FGFR2b receptor isoform, activating downstream signaling pathways that promote cell proliferation, migration, and differentiation. This growth factor is particularly important in skin homeostasis and regeneration, as it stimulates keratinocyte proliferation. FGF7 is produced mainly by mesenchymal cells and acts on neighboring epithelial tissues, making it a key mediator in epithelial-mesenchymal interactions. Its therapeutic potential has been explored in conditions like skin ulcers, pulmonary fibrosis, and mucosal injuries. Besides, Fibroblast Growth Factor Receptor 1 (FGFR1) has been identified as an interactor of FGF7, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human FGF7 and recombinant human FGFR1. Briefly, FGF7 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l 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-FGF7 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, 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 450/630nm immediately. The binding activity of recombinant human FGF7 and recombinant human FGFR1 was shown in Figure 1, the EC50 for this effect is 0.018µg/mL.

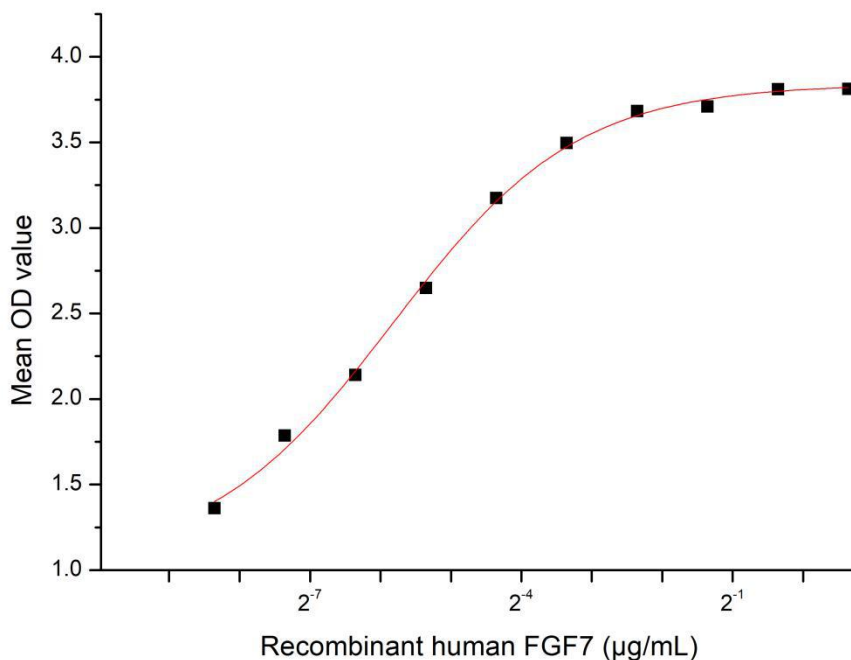


Figure 1. The binding activity of recombinant human FGF7 and recombinant human FGFR1

[IDENTIFICATION]

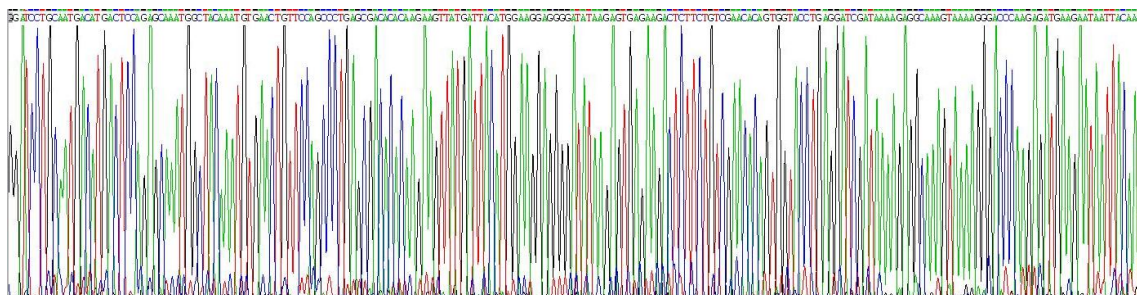


Figure 2. Gene Sequencing (extract)

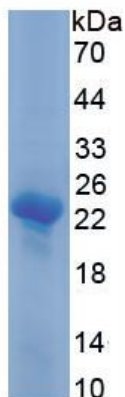


Figure 3. SDS-PAGE

Sample: Active recombinant FGF7, Human

[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.