APC907Hu02 100μg
Active Fibroblast Growth Factor 18 (FGF18)
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: Glu28~Ala207
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 .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 10.7
Predicted Molecular Mass: 24.7kDa
Accurate Molecular Mass: 30kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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]

EEN VDFRIHVENQ TRARDDVSRK
QLRLYQLYSR TSGKHIQVLG RRISARGEDG DKYAQLLVET DTFGSQVRIK
GKETEFYLCM NRKGKLVGKP DGTSKECVFI EKVLENNYTA LMSAKYSGWY
VGFTKKGRPR KGPKTRENQQ DVHFMKRYPK GQPELQKPFK YTTVTKRSRR
IRPTHPA

[ACTIVITY]

Fibroblast Growth Factor 18 (FGF-18) is a 20 kDa protein that plays an important role in skeletal development and bone homeostasis. It is expressed in embryonic somites and the neural fold, adult lung, cerebellar and hippocampal neurons. FGF-18 binds to FGF R2c, FGF R3c as well as the Golgi protein GLG1 and induces the proliferation of astrocytes and microglia, vascular endothelial cells, dermal fibroblasts, papilla cells, and keratinocytes. FGF-18 is required for normal skeletal development. A functional binding ELISA assay was conducted to detect the interaction of recombinant human FGF18 and recombinant human FGFR1. Briefly, FGF18 was 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℃. Wells were washed with PBST and incubated for 1h with anti-FGF18 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human FGF18 and recombinant human FGFR1 was shown in Figure 1, the EC50 for this effect is 0.26 ug/mL.

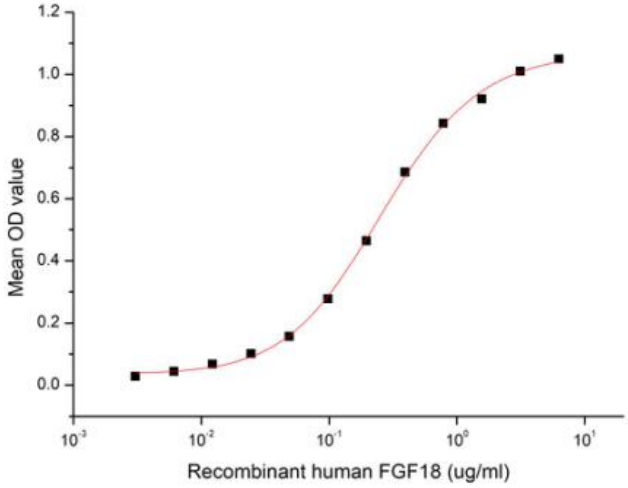

Figure 1. The binding activity of recombinant human FGF18 and recombinant human FGFR1

[IDENTIFICATION]

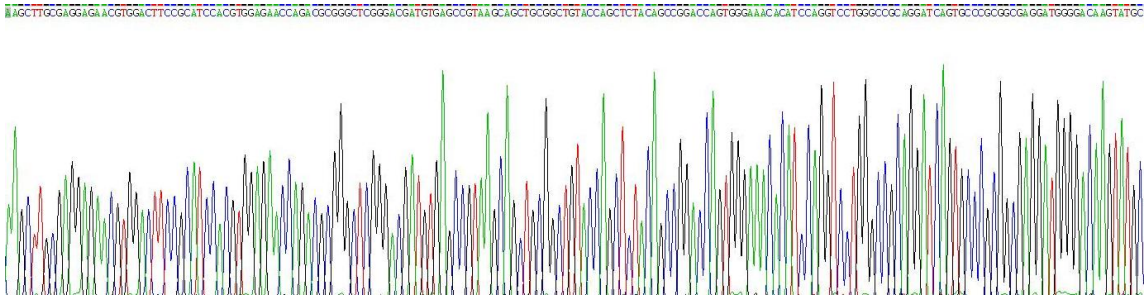

Figure 2. Gene Sequencing (extract)

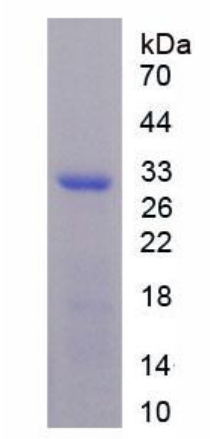

Figure 3. SDS-PAGE

Sample: Active recombinant FGF18, 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.