APA172Hu01 200μg
Active Platelet Factor 4 (PF4)
Organism Species: *Homo sapiens (Human)*
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: Ala31~Ser101

Tags: N-terminal His-tag

Purity: >97%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, 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: 6.5

Predicted Molecular Mass: 14.5kDa

Accurate Molecular Mass: 15kDa 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^{o}C for one month.

Aliquot and store at -80^{o}C for 12 months.

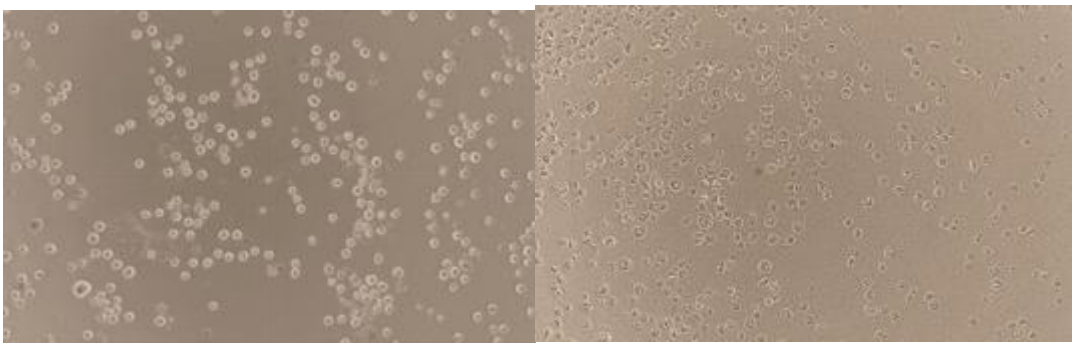
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

AEAEEDGDLQ CLCVKTTSQV RPRHITSLEV IKAGPHCPTA QLIATLKNGR KICLDLQAPL YKKIIKKLLE S

[ACTIVITY]

Platelet factor 4 (PF4) is a small cytokine belonging to the CXC chemokine family that is also known as chemokine (C-X-C motif) ligand 4 (CXCL4). This chemokine is released from alpha-granules of activated platelets during platelet aggregation, and promotes blood coagulation by moderating the effects of heparin-like molecules. Due to these roles, it is predicted to play a role in wound repair and inflammation. It was reported that PF4 can inhibits U937 cells proliferation. To test the effect of U937 on cell apoptosis, U937 cells were seeded into 96-well plates at a density of 5,000 cells/well with 5% serum standard 1640 including various concentrations of recombinant Human PF4. After incubated for 48 h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μL of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 4 hours at 37℃. Proliferation of U937 cells after incubation with PF4 for 48 h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 assay after incubation with recombinant Human PF4 for 48 h. The result was shown in Figure 2. It was obvious that PF4 significantly inhibit cell viability of U937 cells. The ED50 is 2.2-3.1μg/mL.



A B

Figure 1. Inhibition of U937 cells proliferation after stimulated with PF4

(A) U937 cells cultured in 1640, stimulated with 10 μg/mL PF4 for 48h;

(B) Unstimulated U937 cells cultured in 1640 for 48h.

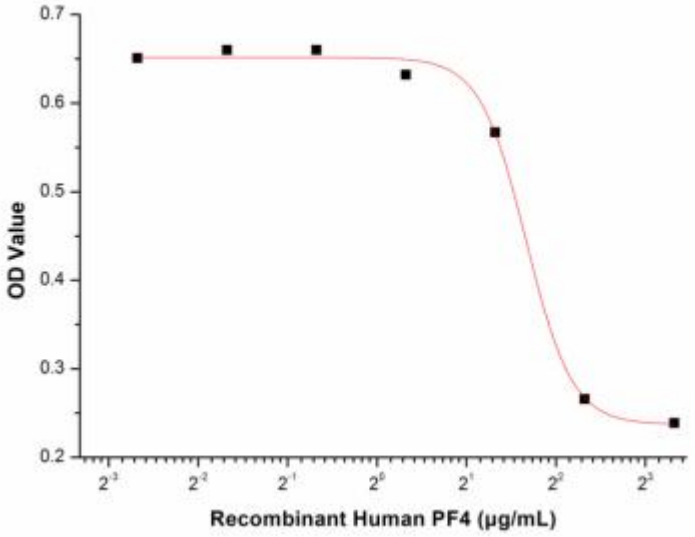


Figure 2. Inhibition of U937 cells proliferation after stimulated with PF4.

[IDENTIFICATION]

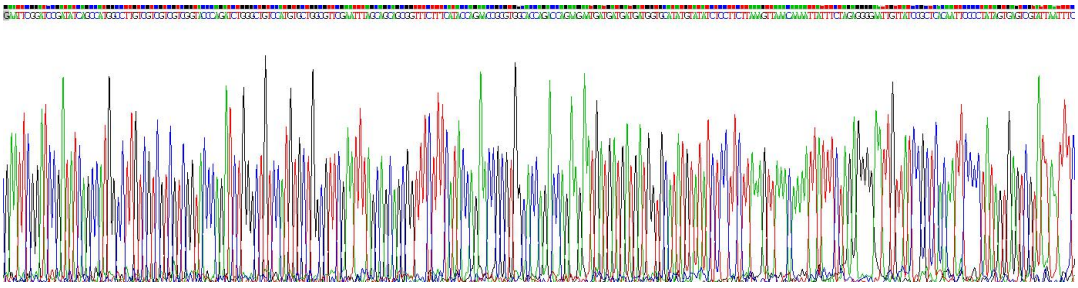


Figure 3. Gene Sequencing (extract)

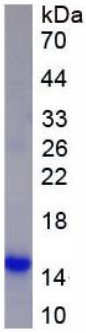


Figure 4. SDS-PAGE

Sample: Active recombinant PF4, Human

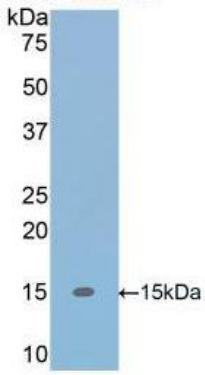


Figure 5. Western Blot

Sample: Recombinant PF4, Human;

Antibody: Rabbit Anti- Human PF4 Ab (PAA172Hu01)

[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.