

**APA528Mu01 100µg**  
**Active Platelet Derived Growth Factor Subunit A (PDGFA)**  
**Organism Species: Mus musculus (Mouse)**  
*Instruction manual*

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Glu90~Glu190

**Tags:** N-terminal His-tag

**Purity:** >98%

**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; In vivo assays.

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

**Predicted isoelectric point:** 8.9

**Predicted Molecular Mass:** 15.2kDa

**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°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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E AVPAVCKTRT
VIYEIPRSQV DPTSANFLIW PPCVEVKRCT GCCNTSSVKC QPSRVHHRSV
KVAKVEYVRK KPKLKEVQVR LEEHLECACA TSNLNPDHRE
```

## **[ ACTIVITY ]**

PDGFA (Platelet-derived growth factor subunit A) is a Growth factor that plays an essential role in the regulation of embryonic development, cell proliferation, cell migration, survival and chemotaxis. PDGFA has been described as a chemoattractant for monocytes and proven to be able to induce chemotactic migration of THP-1 cells. Therefore, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of PDGFA on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (100uL cell suspension, 10<sup>6</sup>cells/mL in RPMI 1640 with 0.5% FBS) and PDGFA (1.5ng/mL, 7.5ng/mL and 15ng/mL diluted separately in serum free RPMI 1640 ) was added in lower chamber with a polycarbonate filter (8µm pore size) used to separate the two compartments. After incubation at 37°C with 5%CO<sub>2</sub> for 3h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification (×40) and the number of migrated cells were counted at high magnification (×400) randomly (five fields for each filter). Result shows PDGFA is able to induce migration of THP-1 cells. The migrated THP-1 cells in low chamber at low magnification (×40) were shown in Figure 1. Five fields of each chamber were randomly chosen, and the migrated

cells were counted at high magnification ( $\times 400$ ). Statistical results were shown in Figure 2. The optimum chemotaxis of PDGFA occurs at 1.5ng/mL.

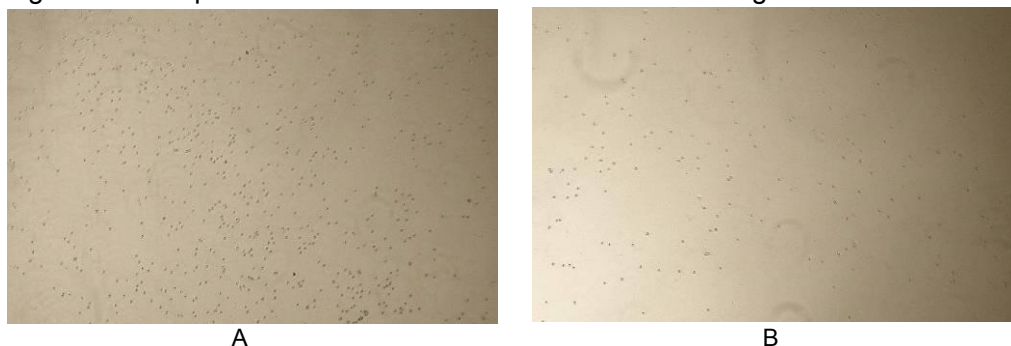


Figure 1. The chemotactic effect of PDGFA on THP1 cells.

(A) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 with 1.5ng/mL PDGFA was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 40$ ) after incubation for 3h;

(B) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 without PDGFA was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 40$ ) after incubation for 3h.

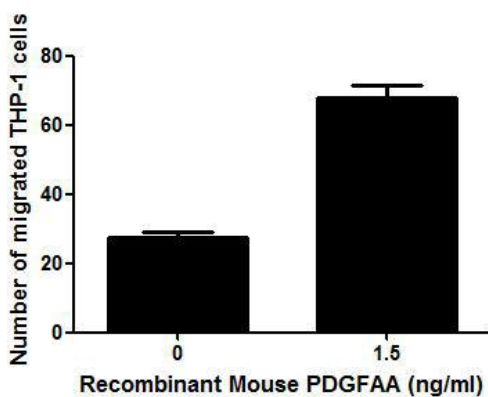


Figure 2. The chemotactic effect of PDGFA on THP-1 cells

[ IDENTIFICATION ]

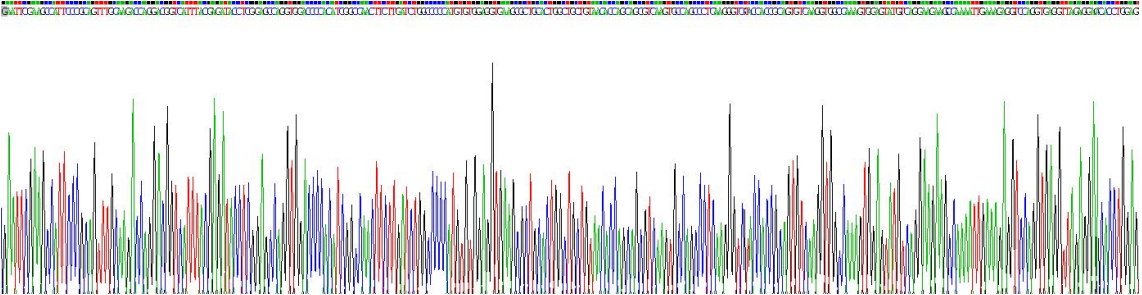


Figure 3. Gene Sequencing (extract)

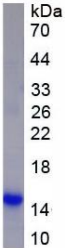


Figure 4. SDS-PAGE

Sample: Active recombinant PDGFA, Mouse

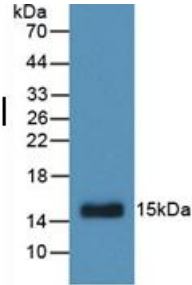


Figure 5. Western Blot

Sample: Recombinant PDGFA, Mouse;

Antibody: Rabbit Anti-Mouse PDGFA Ab (PAA528Mu01)

[ 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.