

Datasheet for ABIN6239819

## PDGFA Protein (AA 94-194) (His tag)



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### 3 Images

#### Overview

Quantity:	50 µg
Target:	PDGFA
Protein Characteristics:	AA 94-194
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Biological Activity:	Active
Purification tag / Conjugate:	This PDGFA protein is labelled with His tag.
Application:	Activity Assay (AcA), Cell Culture (CC)

#### Product Details

Characteristics:	Tag location: N-terminal His Tag
Purity:	> 95 %
Biological Activity Comment:	<p>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 (100µL cell suspension, 106cells/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</p>

## Product Details

were observed by inverted microscope at low magnification (x40) and the number of migrated cells were counted at high magnification (x400) 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 (x40) were shown in Figure 1. Five fields of each chamber were randomly chosen, and the migrated cells were counted at high magnification (x400). Statistical results were shown in Figure 2. The optimum chemotaxis of PDGFA occurs at 1.5ng/mL.

## Target Details

Target:	PDGFA
Alternative Name:	Platelet Derived Growth Factor Subunit A (PDGFA) ( <a href="#">PDGFA Products</a> )
Background:	Alternative Names: PDGF-A, PDGF1, Platelet Derived Growth Factor Alpha Polypeptide
Molecular Weight:	17kDa
UniProt:	<a href="#">P20033</a>
Pathways:	<a href="#">RTK Signaling</a> , <a href="#">Fc-epsilon Receptor Signaling Pathway</a> , <a href="#">EGFR Signaling Pathway</a> , <a href="#">Neurotrophin Signaling Pathway</a> , <a href="#">Smooth Muscle Cell Migration</a> , <a href="#">Platelet-derived growth Factor Receptor Signaling</a>

## Application Details

Application Notes:	Isoelectric Point: 8.9
Restrictions:	For Research Use only

## Handling

Format:	Lyophilized
Buffer:	20 mM Tris, 150 mM NaCl, pH 8.0, containing 1 mM EDTA, 1 mM DTT, 0.01 % SKL, 5 % Trehalose and Proclin300.
Preservative:	Dithiothreitol (DTT), Other preservative, ProClin
Precaution of Use:	This product contains ProClin and Dithiothreitol (DTT): POISONOUS AND HAZARDOUS SUBSTANCES which should be handled by trained staff only.

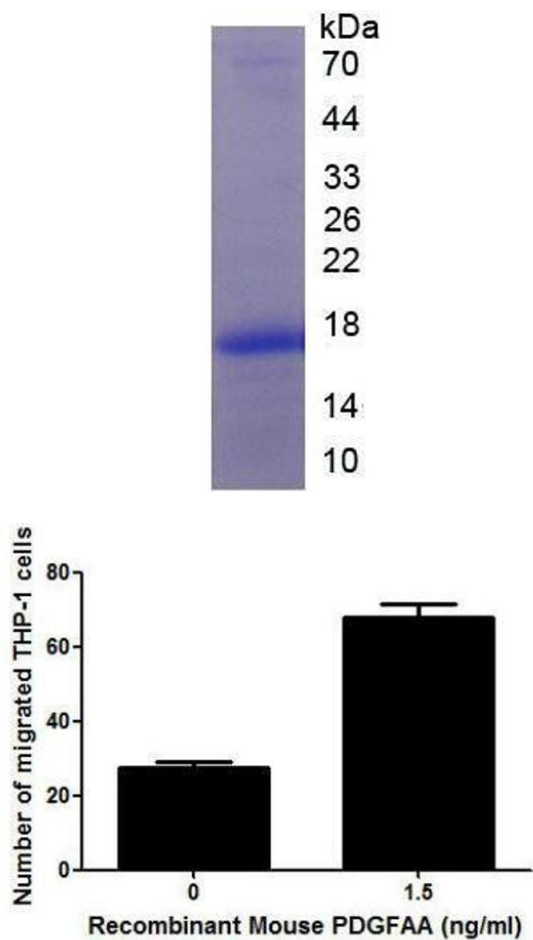


Figure 2. The chemotactic effect of PDGFA on THP-1 cells

Image 1.

**Image 2.** 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, 106cells/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 37oC with 5%CO2 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 (×400).

Statistical results were shown in Figure 2. The optimum chemotaxis of PDGFA occurs at 1.5ng/mL.

Image 3.

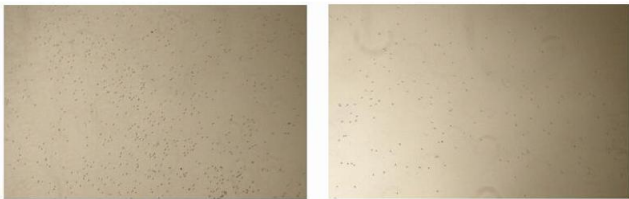


Figure 1.The chemotactic effect of PDGFA on THP1 cells.

(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.