Active Platelet Derived Growth Factor Subunit B (PDGFB)

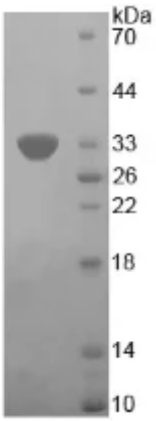
Catalog#:PEH12883

概述（Summary）

别称（Alternative Names）	PDGF-B; PDGF2; SIS; SSV; C-sis; Simian Sarcoma Viral(v-sis)Oncogene Homolog; Platelet Derived Growth Factor Beta Polypeptide; Proto-oncogene c-Sis; Becaplermin
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Glu21-Ala241】
Accession #	P01127
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	28.6 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Growth factor that plays an essential role in the regulation of embryonic development, cell proliferation, cell migration, survival and chemotaxis. Potent mitogen for cells of mesenchymal origin. Required for normal proliferation and recruitment of pericytes and vascular smooth muscle cells in the central nervous system, skin, lung, heart and placenta. Required for normal blood vessel development, and for normal development of kidney glomeruli. Plays an important role in wound healing. Signaling is modulated by the formation of

heterodimers with PDGFA.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

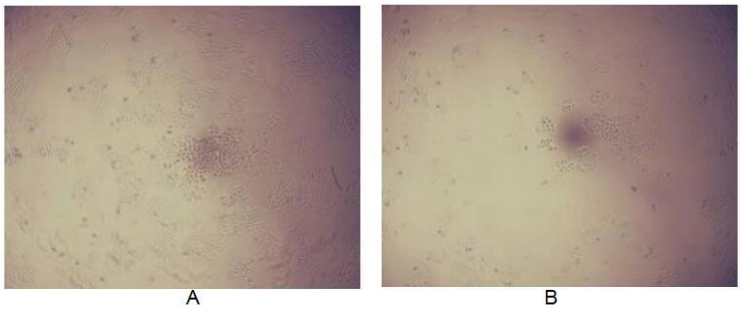
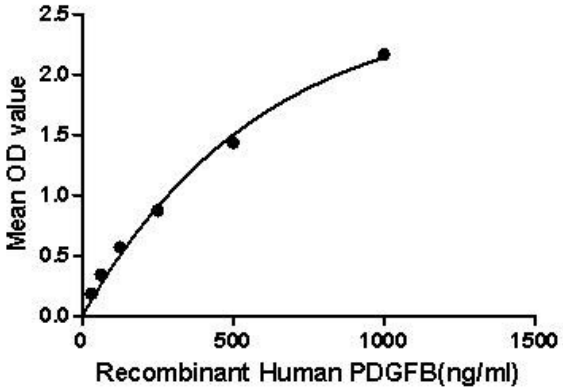


Figure. The binding activity of PDGFB with NRP-1. Platelet-derived growth factor subunit B (PDGFB) is a member of the platelet-derived growth factor family in humans. The four members of this family are mitogenic factors for cells of mesenchymal origin and are characterized by a motif of eight cysteines. This gene product can exist either as a homodimer (PDGF-BB) or as a heterodimer with the platelet-derived growth factor alpha (PDGFA) polypeptide (PDGF-AB), where the dimers are connected by disulfide bonds. Besides, Neuropilin-1 (NRP-1) has been identified as an interactor of PDGFB, thus a binding ELISA assay was conducted to detect the interaction of recombinant human PDGFB and recombinant human NRP-1. Briefly, PDGFB were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to NRP-1-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti- PDGFB pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of PDGFB and NRP-1 was shown in Figure 1, and this effect was in a dose dependent manner.

Figure. Cell proliferation of MCF-7 cells after stimulated with IGF2. PDGFs are mitogenic during early developmental stages, driving the proliferation of undifferentiated mesenchyme and some progenitor populations. During later maturation stages, PDGF signalling has been implicated in tissue remodelling and cellular differentiation, and in inductive events involved in patterning and morphogenesis. In addition to driving mesenchymal proliferation, PDGFs have been shown to direct the migration, differentiation and function of a variety of specialised mesenchymal and migratory cell types, both during development and in the adult animal. A proliferation assay was conducted to detect the bioactivity of recombinant human PDFGB using MCF-7 cells. Briefly, MCF-7 cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well and allowed to attach, replaced with serum-free overnight, then the medium was replaced with 1% serum standard DMEM

prior to the addition of various concentrations of PDGFB. After incubated for 96h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μL of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37℃. Proliferation of MCF-7 cells after incubation with PDGFB for 96h observed by inverted microscope was shown in Figure 2. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant PDGFB for 96h. The result was shown in Figure 3. It was obvious that PDGFB significantly increased cell viability of MCF-7 cells. (A) MCF-7 cells cultured in DMEM, stimulated with 1ng/mL PDGFB for 96h; (B) Unstimulated MCF7 cells cultured in DMEM for 96h.



注意事项（Note）

For Research Use Only , Not for Diagnostic Use.