

Platelet-derived growth factor-BB (PDGF-BB)

recombinant, Human
expressed in Pichia

Catalog Number

GR 006-010 (10ug)

GR 006-050 (50ug)

GR 006-200 (200ug)



Storage Temperature -5 ~ -20°C

Precautions

For *In Vitro* Use Only

Product Description

Platelet-derived growth factor (PDGF) is a dimeric molecule that exists as a homodimer or as a heterodimer of the polypeptide chains. And these polypeptide chains are linked by disulfide bonds. PDGF is expressed in five forms: PDGF-AA, PDGF-AB, PDGF-BB, PDGF-CC and PDGF-DD. Platelet-Derived Growth Factor BB (PDGF-BB) is a member of the platelet-derived growth factor family and plays a crucial role in regulating cell growth, proliferation, and differentiation in various tissues.

PDGF-BB is primarily produced by platelets, endothelial cells, and smooth muscle cells and plays roles by binding to the PDGF receptor (PDGFR) on the surface of cells, leading to the activation of intracellular signaling pathways that regulate various cellular processes.

The main function of PDGF-BB is to stimulate the growth and division of mesenchymal cells, including fibroblasts and smooth muscle cells. It is involved in various physiological and pathological processes, such as wound healing, tissue repair, and cancer. In wound healing and tissue repair, PDGF-BB stimulates the growth and migration of fibroblasts, which are essential for the formation of granulation tissue and extracellular matrix. PDGF-BB has also been used in medical treatments for various conditions, such as chronic

wounds, ulcers, and bone fractures. It has been shown to have potential therapeutic applications in the promotion of tissue regeneration and healing. In cancer, PDGF-BB has been found to be overexpressed in various types of tumors, where it promotes cell proliferation, angiogenesis, and metastasis.

Product Information

Alternative Names :

Platelet-Derived Growth Factor-BB, Glioma-derived growth factor (GDGF), Osteosarcoma-derived Growth Factor (ODGF)

Species : Human

Source : Pichia

Predicted Molecular Mass : 24.6kDa

Amino Acid Sequence :

SLGSLTIAEPAMIAECKTRTEVFEISRRLIDRTNANFL
VWPPCVEVQRCSCGCCNNRNVQCRPTQVQLRPVQV
RKIEIVRKKPIFKKATVTLEDHLACKCETVAAARPVT

Formulation :

Lyophilized from a sterile-filtered aqueous solution containing 20mM Sodium Phosphate, pH 7.0

Product Specifications

Biological activity :

The EC₅₀ ≤ 5.0 ng/mL as determined by a cell proliferation assay using BALB/ 3T3 cells.

Purity :

≥ 95% purity by SDS-PAGE

Endotoxin :

≤ 0.5 EU/mg protein by LAL(Limulus ameobocyte lysate) analysis method.

Preparation and Storage

Storage :

Store at -5 °C to -20 °C.

Stability :

Stable as supplied for 12 months from date of receipt.

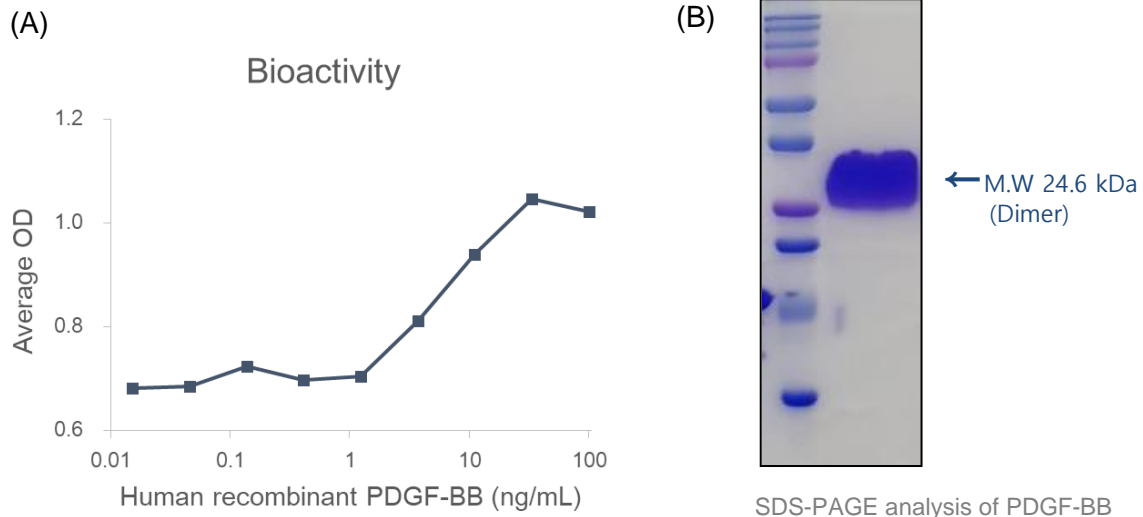
Preparation :

Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex

DATA

(A) The biological activity of Human Recombinant PDGF-BB was tested by its ability to promote the proliferation of BALB/c 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the under example is 4.44 ng/mL.

(B) Human Recombinant PDGF-BB was resolved with SDS-PAGE under and visualized by Coomassie Blue staining. Human Recombinant PDGF-BB has a predicted molecular mass of 24.6 kDa.



References

- Bennett SP, Griffiths GD, Schor AM, Leese GP, Schor SL. *Br J Surg.* 2003 Feb;90(2):133-46. doi: 10.1002/bjs.4019.
- Wang C, Liu Y, He D. *Cytokine.* 2019 Jan;113:13-20. doi: 10.1016/j.cyto.2018.10.019. Epub 2018 Oct 24.
- Barrientos S, Stojadinovic O, Golinko MS, Brem H, Tomic-Canic M. *Wound Repair Regen.* 2008 Sep-Oct;16(5):585-601. doi: 10.1111/j.1524-475X.2008.00410.x.
- Cao Y, Cao R, Hedlund EM. *J Mol Med (Berl).* 2008 Jul;86(7):785-9. doi: 10.1007/s00109-008-0337-z. Epub 2008 Apr 8.