PDGF-BB Protein, Human

Cat. No.:	HY-P7055
Synonyms:	rHuPDGF-BB; PDGF-2; GDGF; ODGF; SIS; SSV
Species:	Human
Source:	E. coli
Accession:	P01127 (S82-T190)
Gene ID:	5155
Molecular Weight:	14-24.8 kDa

PROPERTIES

AA Sequence	S L G S L T I A E P A M I A E C K T R T E V F E I S R R L I D R T N A N F L V W P P C V E V Q R C S G C C N N R N V Q C R P T Q V Q L R P V Q V R K I E I V R K K P I F K K A T V T L E D H L A C K C E T V A A A R P V T
Biological Activity	1.The ED_{50} is <3 ng/mL as measured by murine Balb/c 3T3 cells, corresponding to a specific activity of >3.3 × 10^5 units/mg. 2.Measured in a cell proliferation assay using BALB/c 3T3 cells. The ED_{50} for this effect is 5-42 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS, pH 7.4 or 20 mM NaAc-HAc, pH 4.5.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Recombinant Human Platelet-derived Growth Factor-BB is the most active PDGF isoform, binds to PDGF receptor, promotes diverse cell types proliferation and osteogenesis, and further stimulates bone formation in fracture or defect. Platelet-derived growth factor-BB (PDGF-BB) is primarily secreted from platelet α-granules and is the most active PDGF isoform in bone and other connective tissue as it can bind to all known PDGF receptors. PDGF-BB plays an important role in bone regeneration by inducing mitogenesis, chemotaxis, extracellular matrix formation, and vascularization[1]. Recombinant Human Platelet-derived Growth Factor-BB (rhPDGF-BB) accelerates tendon healing by improving matrix remodeling,

increased collagen synthesis, and increased cell proliferation. Recombinant Human Platelet-derived Growth Factor-BB is also efficacious in a non-ruptured, degenerated, tendinopathy model. Furthermore, Recombinant Human Platelet-derived Growth Factor-BB addresses chronic tendinopathies by inducing proliferation and migration of progenitor cells and tenocytes, which stimulate structural repair of the degenerated tendon[2].

REFERENCES

[1]. Sun H, et al. Recombinant human platelet-derived growth factor-BB versus autologous bone graft in foot and ankle fusion: A systematic review and meta-analysis. Foot Ankle Surg. 2017 Mar;23(1):32-39.

[2]. Solchaga LA, et al. Comparison of the effect of intra-tendon applications of recombinant human platelet-derived growth factor-BB, platelet-rich plasma, steroids in a rat achilles tendon collagenase model. J Orthop Res. 2014 Jan;32(1):145-50.

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