



Recombinant Human Platelet-Derived Growth Factor-BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	200-055
Size:	5 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	<i>PDGFB, sis</i>
Synonyms:	Platelet-derived growth factor B chain, PDGF2, Proto-oncogene c-Sis

PDGFs are disulfide-linked dimers consisting of two 12.0-13.5 kDa polypeptide chains, designated PDGF-A and PDGF-B chains.

The three naturally occurring PDGFs; PDGF-AA, PDGF-BB and PDGF-AB, are potent mitogens for a variety of cell types including smooth muscle cells, connective tissue cells, bone and cartilage cells, and some blood cells. The PDGFs are stored in platelet alpha-granules and are released upon platelet activation. The PDGFs are involved in a number of biological processes, including hyperplasia, chemotaxis, embryonic neuron development, and respiratory tubule epithelial cell development.

Two distinct signaling receptors used by PDGFs have been identified and named PDGFR-alpha and PDGFR-beta. PDGFR-alpha is high-affinity receptor for each of the three PDGF forms.

On the other hand, PDGFR-beta interacts with only PDGF-BB and PDGF-AB. Recombinant human PDGF-BB is a 24.3kDa disulfide-linked homodimer of two B chains (218 total amino acids).

References

1. Fredriksson L et al, Cytokine Growth Factor Rev 15:197-204, 2004
2. Heldin CH et al, Br J Cancer 57:591-3, 1988
3. Deuel TF et al, Biofactors 1:213-7, 1988
4. Meyer-Ingold and Eichner W, Cell Biol Int 19:389-98, 1995
5. Betsholtz C and Raines EW, Kidney Int 51:1361-9, 1997
6. Kaetzel DM, Cytokine Growth Factor Rev 14:427-46, 2003
7. Simm A et al, Basic Res Cardiol Suppl 3:40-3, 1998

Sequence

SLGSLTIAEPAMIAECKTRTEVFEISRRLIDRTNANFLVWPPCVEVQRCSGC
CNNRNVQCRPTQVQLRPVQVRKIEIVRKKPIFKKATVTLLEDHLACKCETVAA
ARPVT

Database References

Protein RefSeq:	NP_002599.1
Uniprot ID:	P01127
mRNA RefSeq:	NM_002608.2

Product Specifications

Expressed in	E.coli
Purity	> 95% by SDS-PAGE & silver stain
Buffer	50 mM acetic acid
Endotoxin	< 0.1ng per ug of PDGF-BB
Stabilizer	None
Formulation	lyophilized
Length (aa):	109
MW:	24,3 kDa
Result by N-terminal sequencing	UNDER WORK!

Stability: The lyophilized PDGF-BB is stable for a few weeks at room temperature, but best stored at -20°C. Reconstituted PDGF-BB is best stored at -20°C to -70°C.

Reconstitution: The lyophilized PDGF-BB should be reconstituted in 50mM acetic acid to a concentration not lower than 100µg/ml. For long term storage of reconstituted protein addition of carrier protein (e.g. BSA or HSA; 0.1%) is recommended.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: The biological activity was determined by the induction of proliferation in NHDF cells (Normal Human Dermal Fibroblasts).



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Handling/Application

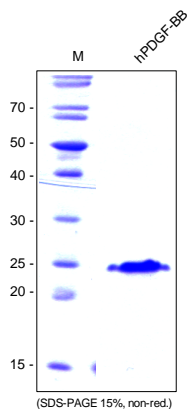


Fig. 1: SDS-PAGE analysis of recombinant human PDGF-BB. Sample was loaded in 15% SDS-polyacrylamide gel under non-reducing condition and stained with Silver stain.

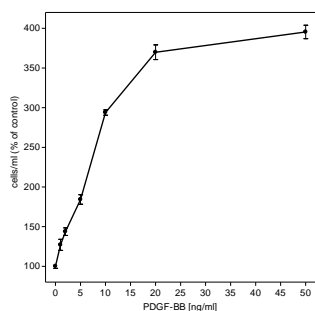


Fig. 2: Dose-dependent stimulation of cell proliferation in NHDF cells by recombinant human PDGF-BB. Values are the means (\pm SD) of triplicate determinations and expressed as percentage of control.