



# Recombinant Human Platelet-Derived Growth Factor-AB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

|                           |                            |
|---------------------------|----------------------------|
| <b>Cat.-no:</b>           | <b>200-053S</b>            |
| <b>Size:</b>              | 2 µg                       |
| <b>Lot. No.:</b>          | According to product label |
| <b>Country of origin:</b> | Germany                    |

## Scientific Background

|                  |   |
|------------------|---|
| <b>Gene:</b>     | <i>PDGFB, sis</i>   |
| <b>Synonyms:</b> | 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-AB is a 25.5 kDa disulfide-linked dimer, consisting of one A chain and one B chains (234 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

Alpha chain:  
MSIEEAVPAVCKTRTVIYEIPRSQVDPTSANFLIWPPCDEVKRCCTGCCNTSS  
VKCQPSRVHHRSVKVAKVEYVRKKPKLKEVQVRLEEHLACACATSLNPDYR  
EEDTGRPRESGKKRKRRLKPT  
Beta chain:  
MSLGSLTIAEPAMIAECKTRTEVFEISRRLIDRTNANFLVWPPCDEVQRCSSG  
CCNNRNVCQRPTQVQLRPVQVRKIGIVRKKPIFKKATVTLGDHLACKCETVA  
AAREPVT

## Database References

|                        |                           |
|------------------------|---------------------------|
| <b>Protein RefSeq:</b> | NP_002599.1 ; NP_002598.2 |
| <b>Uniprot ID:</b>     | P01127; P04085            |
| <b>mRNA RefSeq:</b>    | NM_002608.2; NM_002607.5  |

## Product Specifications

|                     |                                  |
|---------------------|----------------------------------|
| <b>Expressed in</b> | E.coli                           |
| <b>Purity</b>       | > 95% by SDS-PAGE & silver stain |
| <b>Buffer</b>       | 50 mM acetic acid                |
| <b>Endotoxin</b>    | < 0.1ng per ug of PDGF-AB        |
| <b>Stabilizer</b>   | None                             |
| <b>Formulation</b>  | lyophilized                      |
| <b>Length (aa):</b> | 126, 110                         |
| <b>MW:</b>          | 25,5 kDa                         |

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

**Reconstitution:** The lyophilized PDGF-AB 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.



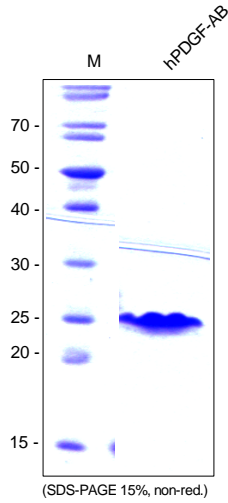
**AVOID REPEATED FREEZE AND THAW CYCLES!**

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

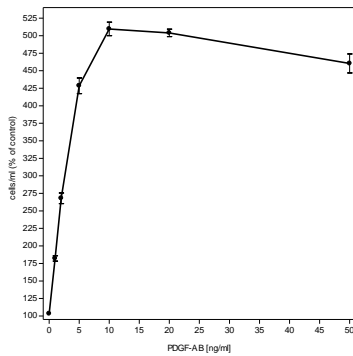


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## Handling/Application



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



**Fig. 2:** Human PDGF-AB-induced proliferation of NHDF cells (Normal Human Dermal Fibroblast cells).