SYMANSIS
CELL SIGNALING SCIENCE

Product Data Sheet

human cell expressed PDGF-B^{hex}

Source	A DNA sequence encoding the human PDGF-B protein sequence (containing the signal peptide sequence, N propeptide, and the mature PDGF-B sequence) was expressed in modified human 293 cells.
Molecular Mass	Under reducing conditions Symansis PDGF-B^{hex} migrates as a broad band between 15.2 and 16.1 kDa on SDS-PAGE due to post-translational modifications, in particular glycosylation. This compares with unmodified PDGF-B polypeptide that has a predicted monomeric molecular mass of 12.29 kDa.
pI	Symansis PDGF-B^{hex} has a predicted pI of 9.38.
% Carbohydrate	Symansis purified PDGF-B^{hex} consists of 30-45% carbohydrate by weight.
Glycosylation	Symansis PDGF-B^{hex} contains N-linked oligosaccharides and a predicted O-linked Mannose.
Purity	>95%, as determined by SDS-PAGE, visualized by Coomassie Brilliant Blue.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8℃. Following reconstitution short-term storage at 4℃ is recommended, with longer-term sto rage in aliquots at -18 to -20℃. Repeated freeze thawing is not recommended.
Activity	The ED_{50} of PDGF-B^{hex}s typically 14-25 ng/mL as measured in a cell proliferation assay using the murine Balb/3T3 fibroblast cell line.
Theoretical Sequence	SLGSLTIAEPAMIAECKTRTEVFEISRRLIDRTNANFLVWPPCVEVQRCSGCCNNRNVQCR PTQVQLRPVQVRKIEIVRKKPIFKKATVTLEDHLACKCETVAAARPV

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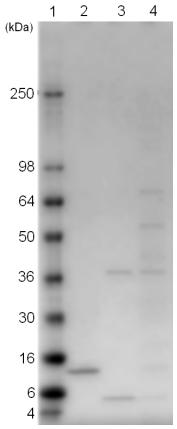
1D gel



1D gel data	Lane 1– MW markers; Lane 2– PDGF-B hex; Lane 3– PDGF-B hex treated with PNGase F to remove potential N-linked glycans; Lane 4– PDGF-B hex treated with a glycosidase cocktail to remove potential N- and O-linked glycans. Approximately 5 µg of protein was loaded per lane; Gel was stained using Coomassie. Drop in MW after treatment with PNGase F indicates presence of N-linked glycans. Additional bands in lane 3 and lane 4 are glycosidase enzymes.
Background Information	The platelet-derived growth factor (PDGF) family consists of four different polypeptide chains; PDGF-A, PDGF-B, PDGF-C and PDGF-D, sharing approximately 25% sequence homology. The biological effects of PDGF-B are exerted via two receptor tyrosine kinases, PDGFRA and PDGFRB. PDGF-B is expressed predominantly in platelets and the heart, but has been detected in the majority of human organs. PDGF-B is a potent mitogen for mesenchymal cells such as fibroblasts, smooth muscle cells, and neuroectodermal cells such as oligodendrocytes, and plays a critical role in wound healing and tumor development. PDGF-B is an important growth factor contributing to angiogenesis and possibly lymphatic metastasis due to lymphangiogenesis. Additionally, PDGF-B plays a crucial role in wound healing. Studies have also suggested that PDGF-B is involved in the CNS including having a neuroprotective or neurotrophic effect in the developing or adult CNS, promoting angiogenic responses to injury in the CNS and remyelination. For a review of PDGF-B and the PDGF family, please see Fredriksson et. al. (2004) Cytokine Growth Factor Rev. 2004 Aug;15(4):197-204