

## Background

PDGF is a major serum mitogen that can exist as a homo or hetero-dimeric protein consisting of disulfide-linked PDGF-A and PDGF-B chains. The PDGF-AA, PDGF-BB and PDGF-AB isoforms have been shown to bind to two distinct cell surface PDGF receptors with different affinities. Where as PDGF R $\alpha$  binds all three PDGF isoforms with high affinity, PDGF R $\beta$  binds PDGF-BB only with high affinity. Both PDGF R $\alpha$  and PDGF R $\beta$  are members of the class III subfamily of receptor tyrosine kinases (RTK) that also includes the receptors for M-CSF, SCF and Flt3 ligand. All class III RTKs are characterized by the presence of five immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. PDGF binding induces receptor homo- and hetero-dimerization and signal transduction. The expression of the  $\alpha$  and  $\beta$  receptors is independently regulated in various cell types. Recombinant soluble PDGF R $\beta$  binds PDGF with high affinity and is potent PDGF antagonist.

## References:

- Heldin, C.H. and L. Claesson-Welsh (1994) in *Guidebook to Cytokines and Their Receptors*, Nicola, N.A. ed. Oxford University Press, New York, p. 202.

## Description

<b>Source</b>	Murine myeloma cell line, NS0-derived			
	Human PDGF R $\beta$ Leu33 - Phe530 (Glu241Asp) Accession # P09619	ENIEGRMD	Human IgG <sub>1</sub> (Pro100 - Lys330)	6-His tag
	N-terminus		C-terminus	
<b>N-terminal Sequence Analysis</b>	Leu33			
<b>Predicted Molecular Mass</b>	84 kDa (monomer)			

## Specifications

<b>SDS-PAGE</b>	150 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to inhibit the biological activity of PDGF-BB using NR6R-3T3 mouse fibroblasts. Raines, E.W. <i>et al.</i> (1985) <i>Methods Enzymol.</i> <b>109</b> :749. The ED <sub>50</sub> for this effect is typically 1 - 3 $\mu$ g/mL in the presence of 4 ng/mL rhPDGF-BB.
<b>Endotoxin Level</b>	<1.0 EU per 1 $\mu$ g of the protein by the LAL method.
<b>Purity</b>	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS. See Certificate of Analysis for details.

## Preparation and Storage

<b>Reconstitution</b>	Reconstitute at 500 $\mu$ g/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

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FOR RESEARCH USE ONLY  
NOT FOR USE IN HUMANS