PGF
Recombinant Human Placenta Growth Factor 1

Catalog No.	CRP201A	**Quantity:**	2 µg
	CRP201B		5 µg
	CRP201C		1.0 mg
	CRP201D		20 µg

Alternate Names: PGF, PLGF

Description: Human Placenta Growth Factor (PlGF) is a polypeptide growth factor and a member of the Platelet-Derived Growth Factor family but more related to Vascular Endothelial Growth Factor (VEGF). PlGF1 acts only as a very weak mitogen for some endothelial cell types and as a potent chemoattractant for monocytes. The physiological function *in vivo* is still controversial. In several reports it was shown not to be a potent mitogen for endotehlial cells and not angiogenic *in vivo* by using different assays. Very recently it was shown by one investigator, that PlGF1 from cell culture supernatants was angiogenic in the CAM assay and in the rabbit cornea assay. At least one high-affinity receptor for PlGF (FLT-1 or VEGF-R1) has been demonstrated in different primary cell types (e.g. human umbilical vein endothelial cells and monocytes), but PlGF does not bind to KDR/flk-1. Two different proteins can be generated by differential splicing of the human PGF gene: PlGF1 (131 aa native chain) and PlGF2 (152 aa native chain). Both mitogens are secreted proteins, but PlGF2 can bind to heparin with high affinity. PlGF1 is a homodimer, but preparations of PlGF show some heterogeneity on SDS gels depending of the varying degrees of glycosylation. All dimeric forms posses a similar biological profile. There is good evidence that heterodimeric molecules between VEGF and PlGF exists and that they are biological active. Different cells and tissues (e.g. placenta) express PlGF1 and PlGF2 at different rates. A very related protein of PlGF is VEGF with about 53% homology and VEGF-B with similar biological activities.

UniProt ID: P49763-2

Gene ID: 5228

Source: Insect cells

Molecular Weight: 19 kDa (131 aa) predicted, homodimer
34 kDa apparent due to glycosylation

Formulation: Lyophilized from 50 mM Acetic Acid with BSA

Purity: > 95% by SDS-PAGE and visualized by silver stain.

Endotoxin Level: < 1 EU/µg

Buffer: 50 mM aceic acid

Biological Activity: Measured by its ability to bind to immobilized rh-sFLT1 in a functional ELISA. rhPLGF1 can bind to immobilized rh-sFLT1 (100 ng/well) with a linear range at 0.5-10 ng/mL.

Amino Acid Sequence: LPAVPPQQWALSAGNGSSEVEVVPFQEVWGRSYCRALERLVDVVSEYPSEVEHMFSP SCVSLLRCTGCCGDENLHCVPVETANVTMQLLKIRSGDRPSYVELTFSQHVRCECRPL REKMKPERCGDAVPRR

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Reconstitution: **Centrifuge vial prior to opening**. Add 50 mM acetic acid or PBS to the vial to fully solubilize the protein to a concentration ≥ 100 µg/ml. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein such as 0.1% BSA and store in working aliquots at -20°C to -80°C.

Storage & Stability: Lyophilized protein is stable for 1 year at -20°C to -80°C. Store reconstituted protein in working aliquots at -20°C to -80°C. **Avoid repeated freeze-thaw cycles**.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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