PGF
Recombinant Human Placenta Growth Factor 2

Catalog No.	CRP202-2	**Quantity:**	2 µg
	CRP202A		5 µg
	CRP202-20		20 µg
	CRP202C		1.0 mg

Alternate Names: PGF, PLGF

Description: 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). PlGF acts only as a weak mitogen for those cell types possessing receptors for binding (e.g. vascular endothelial cells). At least one high-affinity receptor for PlGF (FLT1 or VEGFR1) has been demonstrated in different primary cell types (e.g. human umbilical vein endothelial cells and monocytes). In addition to its action as a weak mitogen it is also a chemoattractant for monocytes and endothelial cells. Two different proteins are generated by differential splicing of the human PlGF gene: PlGF1 (131 aa native chain) and PlGF2 (152 aa native chain). Both mitogens are secretable proteins, but PlGF2 can bind to heparin with high affinity. PlGF is apparently a homodimer, but preparations of PlGF show some heterogeneity on SDS gels depending of the varying degrees of glycosylation.

All dimeric forms posses similar biologcal activities. If PlGF is angiogenic in vivo is not clear. However, heterodimers between VEGF and PlGF are mitogenic for endothelial cells and have strong angiogenic activity in vivo (e.g. in the CAM assay or in the cornea pocket assay). Different cells and tissues (e.g. placenta) express PlGF1 and PlGF2 at different rates. A much related protein of PlGF is VEGF with about 53% homology and VEGF-B with similar biological activities.

UniProt ID: P49763-3

Gene ID: 5228

Source: Insect cells

Molecular Weight: 22 kDa (152 aa) predicted, homodimer
45 kDs apparent, due to glycosylation

Formulation: Lyophilized from 50 mM acetic acid with BSA as a carrier protein

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

Endotoxin Level: < 1 EU/µg

Biological Activity: Measured by its ability to bind to immobilized rh-sFLT-1 in a functional ELISA. rhPlGF-2 can bind to immobilized rh-sFLT1 (100 ng/well) with a linear range at 0.5-10.0 ng/ml.

Reconstitution: **Centrifuge vial prior to opening.** Reconstitute with 50 mM acetic acid or PBS to a concentration of not less than 100 µg/ml. After complete solubilization of the protein, it can be further diluted into other buffered solutions such as PBS pH 7.0

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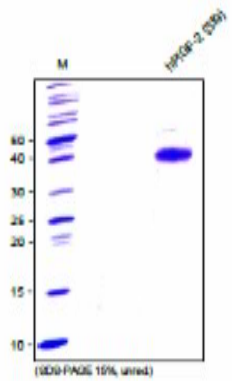
Storage & Stability: Lyophilized protein is stable for 1 year at -20°C to -80°C. Store reconstituted protein in working aliquots at -20°C to -80°C. **Avoid repeated freeze-thaw cycles**.

Amino Acid Sequence: LPAVPPQQWA LSAGNGSSEV EVVPFQEVWG RSYCRALERL VDVVSEYPSE VEHMFSPSCV SLLRCTGCCG DENLHCVPVE TANVTMQLLK IRSGDRPSYV ELTFSQHVRC ECRPLREKMK PERRRPKGRG KRRREKQRPT DCHLCGDAVP RR

SDS-PAGE analysis of recombinant human PlGF-2. Sample was loaded in 15% SDS-polyacrylamide get under non-reducing conditions and stained with Coomassie blue.



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