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## Recombinant Human PIGF-2

**Description:** Human Placenta Growth Factor-2 (PlGF-2), a 22 kDa protein consisting of 152 amino acid residues is produced as a homodimer. 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 (FLT-1 or VEGF-R1) 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: PlGF-1 (131 aa native chain) and PlGF-2 (152 aa native chain). Both mitogens are secretable proteins, but PlGF-2 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 possess similar biological 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 PlGF-1 and PlGF-2 at different rates. A much related protein of PlGF is VEGF with about 53% homology and VEGF-B with similar biological activities.

<b>Source:</b>	Insect cells
<b>Molecular Weight:</b>	44 kDa
<b>Purity:</b>	90% by SDS-PAGE and visualised by silver stain
<b>Endotoxin level:</b>	< 0.1 ng per ug of PlGF-2
<b>Stabilizer:</b>	BSA (50-fold)
<b>Buffer:</b>	50 mM acetic acid
<b>Formulation:</b>	lyophilized

**Biological Activity:** Measured by its ability to bind to immobilized rh-sFlt-1 in a functional ELISA. Recombinant human PlGF-2 can bind to immobilized rh-sFlt-1 (100 ng/well) with a linear range at 0.3 - 10 ng/mL.

**Reconstitution:** The lyophilised PlGF-2 is supplied in lyophilized form with carrier-protein (BSA) and can be reconstituted with 0.05 M acetic acid or PBS. This solution can be diluted into other buffered solutions or stored frozen for future use.

**Stability:** The lyophilized human PlGF-2, though stable at room temperature, is best stored in working aliquots at -20°C to -70°C. **Avoid repeated freeze-thaw cycles.**

**Usage:** Human PlGF-2 is offered for research use. Not for drug use. **Not for human use.**

**Catalogue number:** 300-019S

**Size:** 2 µg

**Range:** 0.1-10.0 ng/ml

**\*\* please note : always centrifuge vials before opening \*\***