



# Recombinant Mouse Placenta Growth Factor



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

|                           |                            |
|---------------------------|----------------------------|
| <b>Cat.-no:</b>           | <b>M30-020</b>             |
| <b>Size:</b>              | 20 µg                      |
| <b>Lot. No.:</b>          | According to product label |
| <b>Country of origin:</b> | Germany                    |

## Scientific Background

|                  |                              |
|------------------|------------------------------|
| <b>Gene:</b>     | <i>Pgf</i>                   |
| <b>Synonyms:</b> | PlGF, Placenta Growth Factor |

Placenta growth factor (PlGF) is a member of the vascular endothelial growth factor (VEGF) family of growth factors. PlGF and VEGF share primary structural as well as limited amino acid sequence homology with the A and B chains of PDGF. All eight cysteine residues involved in intra and interchain disulfides are conserved among these growth factors. As a result of alternative splicing, three PlGF RNAs encoding monomeric human PlGF1, PlGF2 and PlGF3 isoform precursors containing 149, 179 and 219 amino acid residues, respectively, have been described. In normal mouse tissues, only one mouse PlGF mRNA encoding the equivalent of human PlGF2 has been identified. Mouse PlGF shares 65% amino acid identity with human PlGF2. The gene for PlGF has been mapped to mouse chromosome 12 and human chromosome 14. PlGF binds with high affinity to Flt1, but not to Flk1/KDR.

## References

1. DiPalma, T. et al. (1996) Mamm. Genome 7:6.
2. Cao, Y. et al. (1997) Biochem. Biophys. Res. Commun. 235:493.
3. Ferrara, N. et al. (1997) Endocrin. Rev. 18:4

## Sequence

ALSAGNNSTEVEVVPFNEVWGRSYCRPMEKLVYILDEYPDEVSHIFSPSCVLLSRCGCGCGDEGLHCVPIKTANITMQILKIPPNRDPHFVEMTFSQDVLCECRPILETTKAERRRKTGKRKRSRNSQTEEPHP

## Database References

|                        |           |
|------------------------|-----------|
| <b>Protein RefSeq:</b> | NP_032853 |
| <b>Uniprot ID:</b>     | P49764    |
| <b>mRNA RefSeq:</b>    | NM_008827 |

## Product Specifications

|  |                                  |
|--|----------------------------------|
| <b>Expressed in</b>                    | Insect cells                     |
| <b>Purity</b>                          | > 95% by SDS-PAGE & silver stain |
| <b>Buffer</b>                          | 25 mM Tris, 75 mM NaCl pH 8.5    |
| <b>Stabilizer</b>                      | BSA                              |
| <b>Formulation</b>                     | freeze dried                     |
| <b>Length (aa):</b>                    | 135 / 132                        |
| <b>MW:</b>                             | ~ 40 kDa (Dimer)                 |
| <b>Result by N-terminal sequencing</b> | ALSAGNNSTE AND AGNNSTE           |

**Stability:** The lyophilized mouse PlGF, though stable at room temperature, is best stored in working aliquots at -20°C to -70°C.

**Reconstitution:** The lyophilized PlGF is supplied in lyophilized form with carrier-protein (BSA) and can be reconstituted with 50mM acetic acid or PBS/water. This solution can be diluted into other buffered solutions or stored frozen for future use.



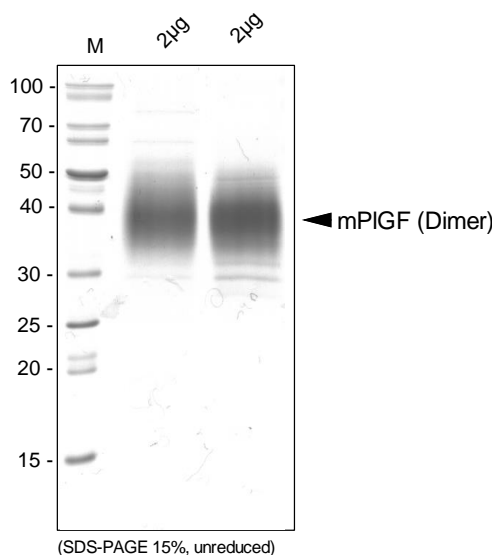
**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** Measured by its ability to bind recombinant human sFlt-1 in a functional ELISA. Recombinant human sFlt-1 can bind to immobilized recombinant mouse PlGF (50 ng/well) with a linear range at 0.5 - 10 ng/mL.

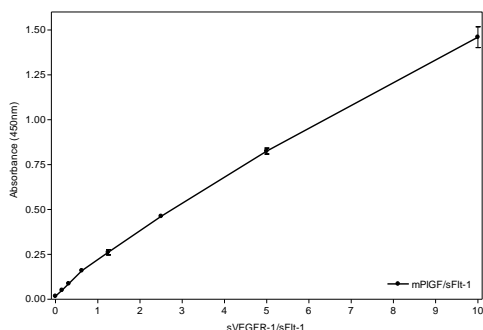


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## Handling/Applications



**Fig. 1:** SDS-PAGE analysis of recombinant mouse PIGF. Samples were loaded in 15% SDS-polyacrylamide gel under non-reducing conditions and stained with Coomassie blue. Lane 1: MWM (kDa); lane 2/3: 2µg of recombinant mouse PIGF.



**Fig. 2:** Functional ELISA for recombinant mouse PIGF produced in insect cells. A 96-well ELISA plate was coated with rmPIGF [100µl/well; 0,5µg/ml]. Increasing concentrations of recombinant human soluble sFlt-1 were added. Detection was performed using a biotinylated monoclonal anti-human VEGFR-1 antibody. As a control recombinant sKDR was used. There was no binding signal detectable.