

## Product Information

### Placenta Growth Factor, human recombinant, expressed in *E. coli*

Catalog Number **P1588**  
Storage Temperature  $-20\text{ }^{\circ}\text{C}$

Synonym: PIGF

#### Product Description

Placenta growth factor (PIGF) is a member of the vascular endothelial growth factor (VEGF) family of growth factors. PIGF (29 kDa) has ~53% amino acid sequence homology in the PDGF-region of VEGF<sup>1</sup> and was isolated from a human placental cDNA library.<sup>1</sup> The gene for PIGF is organized into seven exons and is mapped to chromosome 14.<sup>2</sup> A DNA sequence encoding the mature human PIGF protein sequence (amino acid residues 21–149 of the 149 amino acid residue form of PIGF) was expressed in *Escherichia coli* to produce the recombinant form of human PIGF.<sup>2</sup>

PIGF mRNA is detected in human umbilical vein endothelial cells.<sup>3</sup> PIGF is also detected in placenta, choriocarcinoma cell lines, and in renal cell carcinoma associated with angiogenesis. Placenta growth factor will potentiate VEGF that is present at low concentrations *in vitro* and *in vivo*.<sup>4</sup> PIGF binds with high affinity to Flt-1, but not to Flk-1/KDR.

Recombinant human Placenta Growth Factor is lyophilized from a 0.2  $\mu\text{m}$  filtered solution of 30% acetonitrile and 0.1% TFA containing 50  $\mu\text{g}$  of bovine serum albumin per 1  $\mu\text{g}$  of cytokine.

The activity of human, recombinant placenta growth factor is measured by its ability to bind recombinant human Flt-1/Fc in ELISA.

Immobilized recombinant human Flt-1/Fc at 2  $\mu\text{g}/\text{ml}$  (100  $\mu\text{g}/\text{well}$ ) binds recombinant human placenta growth factor with a linear range of 0.15–0.9 ng/ml.

Purity:  $\geq 95\%$  (SDS-PAGE)

Endotoxin:  $< 1.0$  endotoxin unit/ $\mu\text{g}$  cytokine  
(LAL method)

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

Reconstitute the contents of the vial with sterile phosphate buffered saline (PBS) containing at least 0.1% HSA or BSA. The rhPIGF concentration should be  $\geq 10\text{ }\mu\text{g}/\text{ml}$ .

#### Storage/Stability

Store the product at  $-20\text{ }^{\circ}\text{C}$ .

Upon reconstitution store aliquots at  $-20$  to  $-70\text{ }^{\circ}\text{C}$ . Aliquots can be stored for up to 3 months under sterile conditions. Avoid repeated freezing and thawing.

#### References

1. Maglione, D. et al., Proc. Natl. Acad. Sci. USA, **88**, 9267 (1991).
2. Maglione, D. et al., Oncogene, **8**, 925 (1993).
3. Kaipainen, A. et al., J. Exp. Med., **178**, 2077 (1993).
4. Park, J. et al. J. Biol. Chem., **269**, 25646 (1994).

BG,TD,JF,AH,KAA,MAM 11/16-1