

PIGF-1 active protein

Human PIGF-1

CATALOG # AAA79156	HOST Insect Cells	REACTIVITY Human
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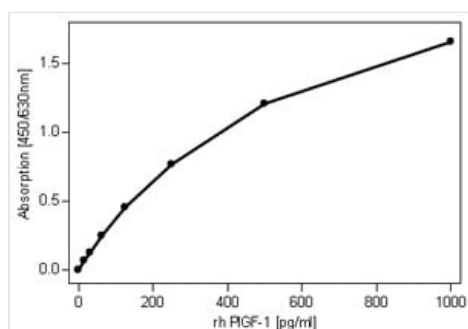
PRODUCT SYNONYMS

PIGF-1; Human PIGF-1; Recombinant Human Placenta Growth Factor-1; PIGF; Placenta Growth Factor; PIGF-1 active protein

PRODUCT SPECIFICATIONS

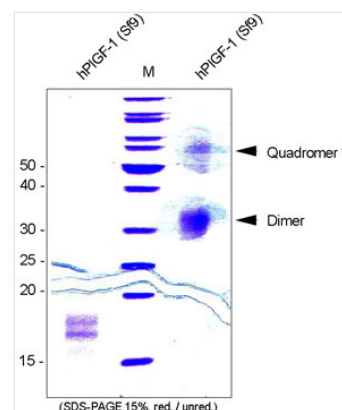
Host	Insect Cells
Reactivity	Human
Purity/Purification	> 95% by SDS-PAGE & silver stain
Form/Format	Sterile filtered protein solution was lyophilized from 50 mM acetic acid; contains 50x BSA as stabilizer
Sequence	LPAVPPQQWA LSAGNGSSEV EVVPFQEVWG RSYCRALERL VDVVSEYPSE VEHMFSPSCV SLLRCTGCCG DENLHCVPE TANVTMQLLK IRSGDRPSYV ELTFSQHVRC ECRPLREKMK PERCGDAPRR
Sequence Length	131
Reconstitution	Centrifuge the vial prior to opening. Do not vortex. The lyophilized PIGF-1 should be reconstituted in 50 mM acetic acid to a concentration of 0.1-1.0 mg/ml
Preparation and Storage	Product Form Temperature Storage Time Lyophilized -20°C to -80°C 1 year Lyophilized 2°C to 8°C 6 months Lyophilized Room Temperature 1 month Reconstituted 2°C to 8°C 1 week Extended Storage -20°C to -80°C 3 months

IMAGES



ELISA

Figure 2. PIGF Sandwich-ELISA using recombinant human PIGF-1 as standard. Mouse anti-human PIGF #178/G10 was used as capture antibody, Biotinylated rabbit anti-human PIGF was used for detection.



SDS-PAGE

Fig. 1: SDS-PAGE analysis of recombinant human PIGF-1. Samples were loaded in 15% SDS-polyacrylamide gel under non-reducing conditions and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for PIGF-1 active protein	Human Placenta Growth Factor-1 (PIGF-1), a 19 kDa protein consisting of 131 amino acid residues is produced as a homodimer. Human Placenta Growth Factor (PIGF) is a polypeptide growth factor and a member of the platelet-derived growth factor family but more related to vascular endothelial growth factor (VEGF). PIGF-1 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 endothelial cells and not angiogenic in vivo by using different assays. Very recently it was shown by one investigator, that PIGF-1 from cell culture supernatants was angiogenic in the CAM assay and in the rabbit cornea assay. At least one high-affinity receptor for PIGF (FLT-1 or VEGF-R1) has been demonstrated in different primary cell types (e.g. human umbilical vein endothelial cells and monocytes) but PIGF does not bind to KDR/flk-1. Two different proteins can be generated by differential splicing of the human PIGF gene: PIGF-1 (131 aa native chain) and PIGF-2 (152 aa native chain). Both mitogens are secretable proteins, but PIGF-2 can bind to heparin with high affinity. PIGF-1 is a homodimer, but preparations of PIGF 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 PIGF exists and that they are biological active. Different cells and tissues (e.g. placenta) express PIGF-1 and PIGF-2 at different rates. A very related protein of PIGF is VEGF with about 53% homology and VEGF-B with similar biological activities.
Product Categories/Family for PIGF-1 active protein	Cytokines & Growth Factors
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 4. Kim KJ et al, Exp Mol Med 44:10-9, 2012 5. De Falco S, Exp Mol Med 44:1-9, 2012

NCBI AND UNIPROT INFORMATION

NCBI GI #	333033785
NCBI GeneID	5228
NCBI Accession #	NP_001193941.1
NCBI GenBank Nucleotide #	NM_001207012.1
UniProt Accession #	P49763; Q07101; Q9BV78; Q9Y6S8
Molecular Weight	~34 kDa (Dimer)
NCBI Official Full Name	placenta growth factor isoform 2
NCBI Official Synonym Full Names	placental growth factor
NCBI Official Symbol	PGF
NCBI Official Synonym Symbols	PGFL; PLGF; PIGF-2; D12S1900; SHGC-10760
NCBI Protein Information	placenta growth factor; placental growth factor, vascular endothelial growth factor-related protein
UniProt Protein Name	Placenta growth factor
UniProt Gene Name	PGF
UniProt Synonym Gene Names	PGFL; PLGF; PIGF
UniProt Entry Name	PLGF_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.