

PIGF-2 active protein

Human PIGF-2

CATALOG # AAA79127	HOST Insect Cells	REACTIVITY Human
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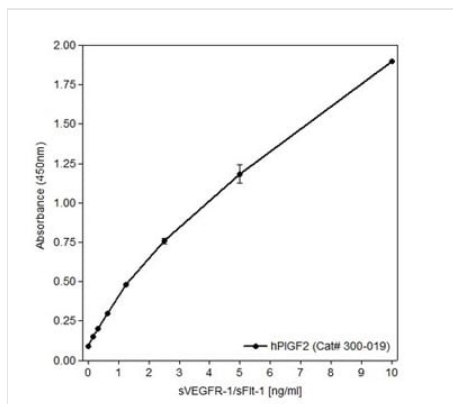
PRODUCT SYNONYMS

PIGF-2; Human PIGF-2; Recombinant Human Placenta Growth Factor-2; PIGF; Placenta Growth Factor; PIGF-2 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 stabilizer
Sequence	LPAVPPQQWA LSALNLSSEV VPFQEVLPV PPQQWALSAG NGSSEVEVVP FQEVWGRSYC RALERLVDVV SEYPSEVEHM FSPSCVSLR CTGCCGDENL HCVPVETANV TMQLLKIRSG DRPSYVELTF SQHVRCECRP LREKMKPERR RPKRGKRRRE KQRPTDCHLC GDAVPRR
Sequence Length	152
Stabilizer	BSA
Length (aa)	152
Reconstitution	Centrifuge the vial prior to opening. Do not vortex. The lyophilized PIG-F 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 Avoid repeated freeze/thaw cycles

IMAGES



ELISA

Figure 2. Functional ELISA: Recombinant human PIGF-2 was coated with 0.5ug/ml and increasing amounts of recombinant human sFlt-1(5) was added as standard. The monoclonal mouse anti-human VEGFR1/Flt-1 antibody in combination with a goat anti-mouse Biotin antibody was used for detection.

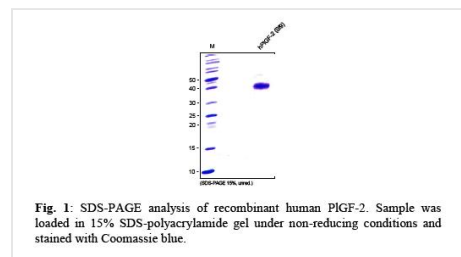


Fig. 1: SDS-PAGE analysis of recombinant human PIGF-2. Sample was loaded in 15% SDS-polyacrylamide gel under non-reducing conditions and stained with Coomassie blue.

Application Data

ADDITIONAL INFORMATION

Related Product Information for PIGF-2 active protein	Human Placenta Growth Factor-2 (PIGF-2), a 22 kDa protein consisting of 152 amino acid residues is produced as a homodimer. 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 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 PIGF (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 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 is apparently a homodimer, but preparations of PIGF show some heterogeneity on SDS gels depending of the varying degrees of glycosylation. All dimeric forms possess similar biological activities. If PIGF is angiogenic in vivo is not clear. However, heterodimers between VEGF and PIGF 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 PIGF-1 and PIGF-2 at different rates. A much related protein of PIGF is VEGF with about 53% homology and VEGF-B with similar biological activities.
Product Categories/Family for PIGF-2 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	~ 45 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.