

PLGF Protein, Human (N-His)

Cat. No.:	HY-P74627A
Synonyms:	Placenta growth factor; PIGF; PGF; PGFL
Species:	Human
Source:	E. coli
Accession:	P49763-2 (L19-R149)
Gene ID:	5228
Molecular Weight:	Approximately 17 kDa

PROPERTIES

AA Sequence	<pre> L P A V P P Q Q W A L S A G N G S S E V E V V P F Q E V W G R S Y C R A L E R L V D V V S E Y P S E V E H M F S P S C V S L L R C T G C C G D E N L H C V P V E T A N V T M Q L L K I R S G D R P S Y V E L T F S Q H V R C E C R P L R E K M K P E R C G D A V P R R </pre>
Biological Activity	Measured in a cell proliferation assay using HUVEC Human umbilical vein endothelial cells. The ED ₅₀ this effect is 20.22 ng/mL, corresponding to a specific activity is 4.95×10 ⁴ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, 200 mM arginine, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The PLGF-2 Protein, a growth factor with significant activity in angiogenesis and endothelial cell growth, plays a crucial role in stimulating the proliferation and migration of these cells. Through binding to the FLT1/VEGFR-1 receptor, PLGF-2 orchestrates angiogenic processes and contributes to the regulation of vascular growth. Notably, the isoform PIGF-2 exhibits additional binding capabilities, forming interactions with NRP1/neuropilin-1 and NRP2/neuropilin-2 in a heparin-dependent manner. Beyond its angiogenic functions, PLGF-2 also promotes tumor growth, implicating its involvement in
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pathological angiogenesis associated with cancer. Structurally, PLGF-2 exists as an antiparallel homodimer linked by disulfide bonds, and it can further manifest as a heterodimer with VEGFA/VEGF. The presence of isoform PLGF-3 as both a homodimer and monomer adds to the complexity of PLGF proteins, highlighting their diverse roles in modulating vascular processes and tumorigenesis.

Caution: Product has not been fully validated for medical applications. For research use only.

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