

Active Recombinant Human Plasminogen

Cat. No. PLG-4186H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human PLG is produced from Human Fluid is a glycosylated polypeptide chain which migrates as a doublet 50 kDa on SDS-PAGE. The PLG is purified by proprietary chromatographic techniques.
Species	Human
Source	Human
Description	There are several proteolytic fragments or specific domains of proteins that act as inhibitors of angiogenesis. These include fragments of plasminogen such as Angiostatin protein kringles 1-4 and kringles 1-5, Endostatin, Restin, PEX, the N-terminal fragment of prolactin, and the Nterminally truncated platelet factor. Angiostatin is a proteolytic protein fragment of plasminogen that is comprised of the first 4 kringle regions. PLG prevents the growth of endothelial cells, and its systemic administration inhibits the growth of primary carcinomas in mice. Angiostatin Kringles 1-3 segment has a larger inhibitory activity than the Angiostatin kringles 1-4 fragment. The protease-activated angiostatin kringles 1-5 is the most potent plasminogen fragment with over 50 times larger endothelial cell specific inhibitory activity. Angiostatin kringles 1-5 systemic administration inhibits growth of fibrosarcoma and significantly reduces neovascularization. Angiostatin is an angiogenesis inhibitor in mouse serum and urine. Angiostatin is a 38 kDa protein fragment of the plasminogen composed of the 1st 4 kringle domains of plasminogen. PLG is also named plasminogen kringles 1-4 and PK1-4. Angiostatin protein is manufactured by the protelytic cleavage of plasminogen by a serine protease from several prostate

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	carcinoma cell lines. The manufacturing of angiostatin by pancreatic cancer cells can be inhibited by TGF-beta 1 along with plasminogen activator inhibitor type-1 (PAI1).
Form	Lyophilized from a (1mg/ml) solution in containing 20mM Hepes buffer pH-8.2 & 20mM NaCl.
Purity	Greater than 98.0% as determined by SDS-PAGE.
Bio-activity	Human PLG significantly inhibits basic-FGF induced endothelial cell proliferation and migration at concentration ranging from 300nM-1.0 uM.
Physical Appearance	Sterile Filtered lyophilized powder.
Solubility	It is recommended to reconstitute the lyophilized PLG in sterile 18Mμ-cm H2O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized PLG although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution PLG should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	PLG plasminogen [Homo sapiens]
Official Symbol	PLG
Synonyms	PLG; plasminogen; DKFZp779M0222; plasmin; OTTHUMP00000017544; OTTHUMP00000017545; OTTHUMP000000197002
Gene ID	5340

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mRNA Refseq	NM_000301
Protein Refseq	NP_000292
MIM	173350
UniProt ID	P00747
Chromosome Location	6q26
Pathway	Blood Clotting Cascade; Complement and Coagulation Cascades; Diabetes pathways; Dissolution of Fibrin Clot; Formation of Platelet plug; Hemostasis; Influenza A; Platelet Activation; Platelet degranulation; Selenium Pathway; Signaling by PDGF; Staphylococcus aureus infection; Syndecan-4-mediated signaling events; amb2 Integrin signaling; p75(NTR)-mediated signaling
Function	apolipoprotein binding; cell surface binding; peptidase activity; protein binding; serine-type endopeptidase activity
Protein PLG PDB 1b2i	