

Growth Factor Data Sheet

GoldBio growth factors are manufactured for **RESEARCH USE ONLY** and cannot be sold for human consumption!

Serpin Peptidase Inhibitory, clade F (SERPINF1), previously called Pigment epithelium-derived factor (PEDF), is encoded by the SERPINF1 gene in humans and found in vertebrates. It is a secreted phosphoglycoprotein that belongs to the clade F subfamily, serpin superfamily of proteinase inhibitors. SERPINF1 is a noninhibitory serpin with neurotrophic, anti-angiogenic, and anti-tumorigenic properties. It is synthesized as a 418 amino acid, ~50 kDa precursor that contains a 19 amino acid signal sequence and a 399 amino acid mature region that shows a pyroglutamate at Gln20. Like other serpins, it contains three β -sheets, 810 α -helices, and a C-terminal RCL (reactive center loop). Unlike other serpins with Ser protease inhibiting activity, SERPINF1 has induces extensive neuronal differentiation in retinoblastoma cells, inhibiting of angiogenesis. As it does not undergo the S (stressed) to R (relaxed) conformational transition characteristic of active serpins, it exhibits no serine protease inhibitory activity. SERPINF1 is researched as a therapeutic candidate for treatment of such conditions as choroidal neovascularization, heart disease, and cancer.

Catalog Number	1120-08
Product Name	SERPINF1, Human Recombinant Human Serpin Peptidase Inhibitor, clade F, member 1 Pigment Epithelium Derived Factor; PEDF SERPINF1 alpha-2 antiplasmin
Source	<i>Escherichia coli</i>
MW	~44.4 kDa (399 amino acids)
Sequence	QNPASPPEEG SPDPDSTGAL VEEEDPFFKV PVNKLAAAVS NFGYDLYRVR SSTSPTTNVL LSPLSVATAL SALSLGAEQR TESIHRALY YDLISSPDH GTYKELDTV TAPQKNLKSA SRIVFEKKLR IKSSFVAPLE KSYGTRPRVL TGNPRLDLQE INNWVQAQMK GKLARSTKEI PDEISILLG VAHFQGWVVT KFDSRKTSL DFYLDEERTV RVPMMSDPKA VLRYGLDSDL SCKIAQLPLT GSMSIIFLP LKVTQNLTLI EESLTSEFIH DIDRELKTQV AVLTVPKLKL SYEGEVTKSL QEMKQLSLFD SPDFSKITGK PIKLTQVEHR AGFEWNEDGA GTTSPGLQP AHLTFPLDYH LNQPPIFVLR DTDGALLFI GKILDPRGP
Accession Number	P36955
Purity	>97% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by its ability to enhance the adhesion of human Saos2 cells to bovine Collagen I coated plate is less than 2 ng/ml, corresponding to a specific activity of >5.0x10 ⁵ IU/mg.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.