

Recombinant Human Pigment Epithelium-derived Factor (Human PEDF)

Product Information

Product Name	Cat#	Size
Recombinant Human Pigment Epithelium-derived Factor (Human PEDF)	92511ES08	5 µg
	92511ES60	100 µg
	92511ES76	500 µg

Product Description

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. The PEDF is a noninhibitory serpin with neurotrophic, anti-angiogenic, and anti-tumorigenic properties. It is synthesized as a 418 a.a. about 50kDa precursor that contains a 19 a.a. signal sequence and a 399 a.a. 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. PEDF has functions of inducing 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. PEDF is researched as a therapeutic candidate for treatment of such conditions as choroidal neovascularization, heart disease, and cancer.

Product Properties

Synonyms	Serpin peptidase inhibitor, clade F, member 1, SerpinF1, EPC-1, Cell proliferation-inducing gene 35 protein
Accession	P36955
GeneID	5176
Source	E.coli-derived human Pigment Epithelium-derived Factor protein, Gln20-Pro418
Molecular Weight	Approximately 44.4 KDa.
AA Sequence	QNPASPPEEG SPDPDSTGAL VEEEDPFFKV PVNKLAAAVS NFGYDLYRVR SSTSPPTNVL LSPLSVATAL SALSLGAEQR TESIIHRALY YDLISSPDIH GTYKELLDTV TAPQKNLKSA SRIVFEKKLR IKSSFVAPLE KSYGTRPRVL TGNPRLDLQE INNWVQAQMK GKLARSTKEI PDEISILLG VAHFKGQWVT KFDSRKTSLE DFYLDEERTV RVPMMSDPKA VLRVGLDSDL SCKIAQLPLT GSMSIIFLP LKVTQNLTLI EESLTSEFIH DIDRELKTVQ AVLTVPKLKL SYEGEVTKSL QEMKLQSLFD SPDFSKITGK PIKLTQVEHR AGFEWNEDGA GTTPSPGLQP AHLTFPLDYH LNQPFIIVLR DTDGALLFI GKILDPRGP
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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 > 5.0 × 10 ⁵ IU/mg.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!