

Recombinant Human Pigment Epithelium-derived Factor

#R00075

Size: 5 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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.

AA Sequence

QNPASPPEEGSPDPDSTGALVEEEDPFFKVPVNKLA
AAVSNFGYDLYRVRSSSTPTTNVLLSPLSVATALSALS
LGAEQRTEIIHRALYYDLISSPDIHGTYKELLDTVTAP
QKNLKSASRIVFEKKLRIKSSFVAPLEKSYGTRPRVLT
GNPRLDLQEINNWWVQAQMKGKLARSTKEIPDEISILL
GVAHFQGWVTKFDSRKTSLEDFYLDEERTVRVPM
MSDPKAVLRYGLDSDLSCKIAQLPLTGSMIIFFLPLK
VTQNLTLIEESLTSEFIHDIDRELKTVQAVLTVPKLKLSY
EGEVTKSLQEMKLQSLFDSPDFSKITGKPIKLTQVEH
RAGFEWNEDGAGTTPSPGLQPAHLTFPLDYHLNQPF
IFVLRDSTDGALLFIGKILDPRGP

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.

Product Specification	
Synonyms	SerpinF1, EPC-1, Cell proliferation-inducing gene 35 protein
Accession	P36955
GeneID	5176
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 44.4 KDa, a single non-glycosylated polypeptide chain containing 399 amino acids.
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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 1×PBS, pH7.0, 5%Trehalose, 0.02%Tween-20.
Endotoxin	Less than 1 EU/μg of rHuPEDF as determined by LAL method.