

Pigment Epithelium-derived Factor

Human, Recombinant (rHuPEDF)

Expressed in *E. coli*

Cat. No. CRP0870

Lot. No. (See product label)

PRODUCT INFORMATION

Description: PEDF is a noninhibitory serpin with neurotrophic, anti-angiogenic, and anti-tumorigenic properties. It is a 50 kDa glycoprotein produced and secreted in many tissues throughout the body. A major component of the anti-angiogenic action of PEDF is the induction of apoptosis in proliferating endothelial cells. In addition, PEDF is able to inhibit the activity of angiogenic factors such as VEGF and FGF-2. The neuroprotective effects of PEDF are achieved through suppression of neuronal apoptosis induced by peroxide, glutamate, or other neurotoxins. The recent identification of a lipase-linked cell membrane receptor for PEDF (PEDF-R) that binds to PEDF with high affinity should facilitate further elucidation of the underlying mechanisms of this pluripotent serpin. To date, PEDF-R is the only signaling receptor known to be used by a serpin family member.

Amino-Acid Sequence: 400 aa (The first 52 amino acid is: MQNPASPPEEGSPDPDSTGALVEEEDPFFKVPVNKLA AAVSNFGYDLRVRS), non-glycosylated

M. W. : 44,500 Da

Recombinant: Expressed in *E. coli*

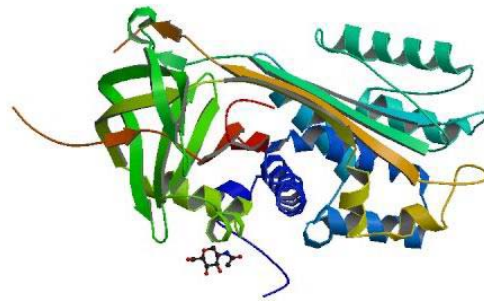
Purity: >95% by SDS-PAGE and HPLC analyses.

Formulation: Lyophilized from a 0.2mm filtered concentrated (1.0mg/ml) solution in 20mM PB, pH7.4, 150mM NaCl.

Endotoxin: Less than 1EU/mg of rHuPEDF as determined by LAL method.

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 $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at $2-8^{\circ}\text{C}$, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at $2-8^{\circ}\text{C}$. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C . Avoid repeated freeze/thaw cycles.



[PDB](#) rendering based on 1imv.

GENE INFORMATION

Gene Name: [SERPINF1](#)

Synonyms: EPC-1; PEDF; PIG35; Serpin-F; pigment epithelium-derived factor; proliferation-inducing protein 35; serine (or cysteine) proteinase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1; Pigment epithelium-derived factor precursor; serpin peptidase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 1

Gene Type: protein coding

mRNA Refseq: [NM_002615](#)

Protein Refseq: [NP_002606](#)

MIM: [172860](#)

GenID: [5176](#)

Uniprot ID: [P36955](#)

Chromosome Location: 17p13.1

Function: serine-type endopeptidase inhibitor activity

Process: cell proliferation, multicellular organismal development, negative regulation of angiogenesis.

REFERENCES

1. Tong JP, Yao YF. Contribution of VEGF and PEDF to choroidal angiogenesis: a need for balanced expressions. Clin. Biochem. 2006; 39 (3): 267-276.
2. Becerra SP, Sagasti A, Spinella P, Notario V. Pigment epithelium-derived factor behaves like a noninhibitory serpin. Neurotrophic activity does not require the serpin reactive loop. J. Biol. Chem. 1995; 270 (43): 25992-25999.

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