



## PEDF (Pigment Epithelium-Derived Factor), human recombinant (rHuPEDF)

**Catalog No:** 99853  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Pigment epithelium-derived factor, PEDF, Serpin-F1, SerpinF1, EPC-1, EPC1, PIG35

### Background

PEDF is a noninhibitory serpin with neurotrophic, anti-angiogenic, and anti-tumorigenic properties. PEDF is a 50,000 dalton glycoprotein created and secreted in many tissues all the way through the body. A key component of the anti-angiogenic action of PEDF is the induction of apoptosis in proliferating endothelial cells. Additionally, PEDF is capable to inhibit the activity of angiogenic factors such as VEGF and FGF-2. The neuro-protective effects of PEDF are achieved through suppression of neuronal apoptosis induced by peroxide, glutamate, or other neurotoxins. The recognition 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. The unique range of PEDF activities associate it as a potential therapeutic agent for the treatment of vasculature related neurodegenerative diseases such as age-related macular degeneration (AMD) and proliferative diabetic retinopathy (PDR). PEDF in addition has the potential to be functional in the treatment of various angiogenesis-related diseases including a number of cancers.

### Description

PEDF human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 400 amino acids and having a molecular mass of 44.5 kDa. Human PEDF is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

The sterile filtered concentrated (1 mg/ml) protein solution was lyophilized with 20 mM sodium phosphate buffer and 150 mM NaCl pH 7.4.

### Solubility

Add deionized water to a working concentration of 0.5 mg/ml and let the lyophilized pellet dissolve completely.

### Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/ thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time.

### Purity

Greater than 95% as determined by SDS-PAGE.

### Amino Acid Sequence

MQNPASPPEE GSPDPDSTGA LVEEEDPFFK VPVNKLAAAV SNFGYDLYRV RSSMSPTTNV LLSPLSVATA LSALSLGAEQ  
RTESIHRAL YYDLISSPDI HGTYKELLDV VTAPQKNLKS ASRIVFEKKL RIKSSFVAPL EKSYGTRPRV LTGNPRLDLQ  
EINNWWQAQM KGKLARSTKE IPDEISILLL GVAHFQGWV TKFDSRKTSL EDFYLDEERT VRVPMMSDPK AVLRYGLDSD

**CONTACT US TODAY**

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



L S C K I A Q L P L T G S M S I I F F L P L K V T Q N L T L I E E S L T S E F I H D I D R E L K T V Q A V L T V P K L K L S Y E G E V T K S L Q E M K L Q S L F  
D S P D F S K I T G K P I K L T Q V E H R A G F E W N E D G A G T T P S P G L Q P A H L T F P L D Y H L N Q P F I F V L R D T D T G A L L F I G K I L D P R G P

#### Usage

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