



## RayBiotech, Inc.

3607 Parkway Lane suite 200  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)

### Certificate of Analysis and Data Sheet

## Recombinant Human Pigment Epithelium-Derived Factor, His Tag

**Catalog No.**  
228-11223

**Source**  
*Escherichia Coli*

### **Synonyms**

Pigment epithelium-derived factor, PEDF, Serpin-F1, SerpinF1, EPC-1, EPC1, PIG35.

### **Introduction**

PEDF is a neurotrophic protein that induces extensive neuronal differentiation in retinoblastoma cells. SerpinF1 is a potent inhibitor of angiogenesis. EPC1 doesn't undergo the stressed to relaxed conformation transition characteristic as of the active serpins since it exhibits no serine protease inhibitory activity.

Aqueous humour level of asymmetric dimethylarginine is correlated with PEDF in humans. ADMA and PEDF levels are increased in response to inflammation in uveitis.

Lack of PEDF expression is a potent factor for the enhancement of tumor growth and angiogenesis in breast cancer.

PEDF & VEGF genes contribute to the development of diabetic retinopathy.

PEDF and VEGF structural changes in blood vessel wall play an important role in the pathophysiology of PD patients.

PEDF-overexpressing tumors exhibited reduced intratumoral angiogenesis.

SerpinF1 is a new promising approach for the treatment of osteosarcoma.

Levels of the natural ocular anti-angiogenic factor SentrinF1 (PEDF) is associated with proliferative retinopathy.

VEGF secreted by retinal pigment epithelial cells upregulates PEDF expression via VEGFR-1 in an autocrine manner.

Sentrin-F1 concentration in the aqueous humor of diabetic patients predicts who will develop progression of retinopathy.

PEDF blocks angiogenic effects of leptin through its anti-oxidative properties.

### **Description**

PEDF Human Recombinant produced in E.Coli containing a natural variant M72T is a single, non-glycosylated, polypeptide chain containing 420 amino acids (20-418 a.a.) and having a total molecular mass of 46.7 kDa. PEDF is fused to a 20 amino acid His Tag at N-terminus and purified by proprietary chromatographic techniques.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***Physical Appearance***

Sterile filtered colorless solution.

### ***Formulation***

The PEDF solution contains 20mM Tris-HCl buffer(pH 8.0), 0.1M NaCl , and 20% glycerol.

### ***Stability***

PEDF although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### ***Amino Acid Sequence***

MGSSHHHHHH SSGLVPRGSH MQNPASPPEE GSPDPDSTGA LVEEEDPFFK  
VPVNKLAAAV SNFGYDLRV RSSMSPTTNV LLSPLSVATA LSALSLGAEQ  
RTESIHRAL YYDLISSPDI HGTYKELLDV VTAPQKNLKS ASRIVFEKKL  
RIKSSFVAPL EKSYGTRPRV LTGNPRLDLQ EINNWWQAQM KGKLARSTKE  
IPDEISILLL GVAHFQGWV TKFDSRKTSL EDFYLDEERT VRVPMMSDPK  
AVLRYGLDSD LSCKIAQLPL TGSMSIIFFL PLKVTQNLTL IEESLTSEFI  
HDIDRELKTV QAVLTVPKLK LSYEGEVTKS LQEMKLQSLF DSPDFSKITG  
KPIKLTQVEH RAGFEWNEDG AGTTPSPGLQ PAHLTFPLDY HLNQPFIFVL  
RDTDTGALLF IGKILDPRGP.

### ***Purity***

Greater than 90% as determined by SDS-PAGE.

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