



# Recombinant Human PEDF

20150227BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>100-355S</b>
<b>Size:</b>	5 µg
<b>Lot. No.:</b>	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	5176
<b>Synonyms:</b>	SERPINF1; OI6; OI12; PEDF; EPC-1; PIG35

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 (1) 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 implicate 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 also has the potential to be useful in the treatment of various angiogenesis-related diseases including a number of cancers. Recombinant PEDF is a 44.5 kDa non-glycosylated protein containing 400 amino acid residues. (1) Notari, I. et al. J Biol Chem., Vol. 281, 38022-38037.

## Sequence

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MQNPASPPEE  GSPDPDSTGA  LVEEEDPFFK  VFPVNKLAADV
SNFGYDLYRV  RSSMSPTTNV  LLSPLSVATA  LSALSILGAEQ
RTESIHRAL  YYDLISSPDI  HGTYKELLDL  VTAPQKNLKS
ASRIVFEKKL  RIKSSFVAPL  EKSYGTRPRV  LTGNPRLDLQ
EINNVVQAQM  KGKLARSTKE  IPDEISILL  GVAHFQGWV
TKFDSRKTSL  EDFYLDEERT  VRVPMMSDPK  AVLRYGLDSD
LSCKIAQLPL  TGSMISIFFL  PLKVTQNLTL  IEESLTSEFI
HDIDRELKTV  QAVLTVPKLK  LSYEGEVTKS  LQEMKLSLF
DSPDFSKITG  KPIKLTQVEH  RAGFEWNEDG  AGTTPSPGLQ
PAHLTFPLDY  HLNQPFIFVL  RDTDTGALLF  IGKILDRG

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## Database References

<b>Protein RefSeq:</b>	NP_002606.3
<b>Uniprot ID:</b>	P36955
<b>mRNA RefSeq:</b>	NM_002615

## Product Specifications

<b>Expressed in</b>	E. coli
<b>Purity</b>	> 90% by SDS-PAGE & HPLC analyses
<b>Endotoxin level</b>	< 0.1 ng /µg of protein (<1EU/µg).
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	400
<b>MW:</b>	44.5 kDa

**Biological Activity:** Data not available.



**AVOID REPEATED FREEZE AND THAW CYCLES!**