

PEDF Protein, Human, Recombinant

General Information

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| Synonyms: | Ol6;Pigment epithelium-derived factor;PIG35;SERPINF1;serpin family F member 1;PEDF;EPC-1;O112 |
| Protein Construction: | Gln20-Pro418 |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | P36955 |
| Molecular Weight: | 44.4 kDa (Predicted) |

QC Testing

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| 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 2.0 ng/ml, corresponding to a specific activity of $> 5.0 \times 10^5$ IU/mg. |
| Purity: | $> 97\%$ as determined by SDS-PAGE; $> 97\%$ as determined by HPLC |
| Endotoxin: | < 1.0 EU/ μ g of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a 0.2 μ m filtered solution in 20 mM PB, pH 7.4, 150 mM NaCl. |

Preparation and Storage

Reconstitution:

It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C . Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C . Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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