

PEDF Protein, Mouse, Recombinant (His)

General Information

Synonyms:	AI195227;Pedfl;Sdf3;Pedf;EPC-1;serpin peptidase inhibitor, clade F, member 1
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Thr 417) of mouse SerpinF1 (NP_035470.3) precursor was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Gln 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P97298
Molecular Weight:	45.8 kDa (predicted); 60-65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized mouse SERPINF1-His at 10 µg/ml (100 µl/well) can bind biotinylated human GST-CSNK2A1 with a linear range of 0.31-2.5 µg/ml.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 25 mM MES, 150 mM NaCl, 0.02% Tween, 20, 5% Trehalose, pH 5.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

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

Pigment epithelium-derived factor, also known as PEDF, Serpin F1, and SERPINF1, is a multiple functional protein that has both anti-angiogenic activity and neurotrophic activity at the same time. PEDF is a secreted glycoprotein

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that belongs to the noninhibitory serpin. It has an alpha/beta core serine-protease inhibitor domain, three major beta-sheets, and ten alpha-helices. PEDF does not inhibit either serine or cysteine proteinases. PEDF exerts diverse physiological activities including anti-angiogenesis, anti-vasopermeability, anti-tumor, and neurotrophic activities. PEDF acts via multiple high affinity ligands and cell receptors. It has been described as a natural angiogenesis inhibitor with neurotrophic and immune-modulation properties. PEDF induces macrophages apoptosis and necrosis through the activation of peroxisome proliferator-activated receptor-gamma by which PEDF could modulate inflammatory reactions in septic shock. It balances angiogenesis in the eye and blocks tumor progression.

Reference

Ren, JG. et al., 2005, Med Hypotheses. 64 (1): 74-8.

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