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California Bioscience

Product Datasheet

Product Name	Pigment Epithelium-Derived Factor Human Recombinant
Cata No	CB501314
Source	*Escherichia Coli.*
Synonyms	Pigment epithelium-derived factor,PEDF, Serpin-F1, SerpinF1, EPC-1, EPC1, PIG35.

Description

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.

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.

The Human PEDF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 95% as determined by SDS-PAGE.

Formulation

The sterile filtered concentrated (1mg/ml) protein solution was lyophilized with 20mM PBS & 150mM NaCl pH-7.4.

Reconstitution

Add deionized water to a working concentration of 0.5mg/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.

Sequence

MQNPASPPEEGSPDPDSTGALVEEEDPFFKVPV
NKLAAAVSNFGYDLYRVR
SSMSPTTNVLLSPLSVATALSALSLGAEQRTESIIH
RALYYDLISSPDIHGTYK
ELLDTVTAPQKNLKSASRIVFEKKLRIKSSFVAPLE
KSYGTRPRVLTGNPRLD
LQEINNWVQAQMKGKLARSTKEIPDEISILLLGVA
HFKGQWVTKFDSRKTS
LEDFYLDEERTVRVPMMSDPKAVLRYGLDSDLSC

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KIAQLPLTGSMSIIFFLPL
KVTQNLTLIEESLTSEFIHDIDRELKTVQAVLTVPKL
LSYEGEVTKSLQEMKL
QSLFDSPDFSKITGKPIKLTQVEHRAGFEWNEDG
AGTTPSPGLQPAHLTFP
DYHLNQPFIFVLRDTDTGALLFIGKILDPRGP

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