



PEDF (Pigment Epithelium Derived Factor), His Tag, human recombinant (rHuPEDF-His)

Catalog No: 97200
Lot No: XXXXX
Source: *E. coli*
Synonyms: Pigment epithelium-derived factor, PEDF, Serpin-F1, SerpinF1, EPC-1, EPC1, PIG35

Background

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) 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.

Physical Appearance

Sterile filtered colorless solution.

Formulation

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

Solubility

Stability

PEDF, although stable at 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.

Purity

Greater than 90% as determined by SDS-PAGE.

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Amino Acid Sequence

MGSSHHHHHH SSSLVPRGSH MQNPASPPEE GSPDPDSTGA LVEEEDPFFK VPVNKLAHAV SNFGYDLYRV RSSMSPTTNV
LLSPLSVATA LSALSLGAEQ RTESIIHRAL YYDLISSPDI HGTYKELLDT VTAPQKNLKS ASRIVFEKKL RIKSSFVAPL
EKSYGTRPRV LTGNPRLDLQ EINN WVQAQM KGKLARSTKE IPDEISILL GVAHFKGQWV TKFDSRKTSL EDFYLDEERT
VRVPMMSDPK AVLRYGLDSD LSKIAQLPL TGSM SIIFFL PLKVTQNLTL IEESLTSEFI HDIDRELKTV QAVLTVPKLK
LSYEGETVKS LQEMKLQSLF DSPDFSKITG KPIKLTQVEH RAGFEWNEDG AGTTPSPGLQ PAHLTFPLDY HLNQPFIFVL
RDTDTGALLF IGKILDPRGP

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