Human PDGF-AA Protein, premium grade

Catalog # PDA-H5113

Synonym

PDGF-A, PDGF1

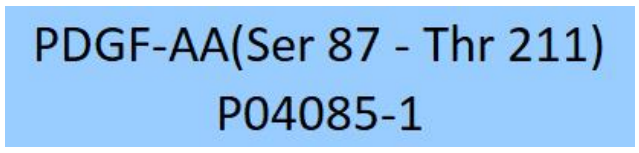
Source

Human PDGF-AA Protein, premium grade (PDA-H5113) is expressed from *E. coli* cells. It contains AA Ser 87 - Thr 211 (Accession # P04085-1).

Predicted N-terminus: Met

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization



This protein carries no "tag".

The protein has a calculated MW of 14.4 kDa. The protein migrates as 30 kDa±3 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under non-reducing (NR) condition (SDS-PAGE).

Endotoxin

Less than 0.1 EU per μg by the LAL method / rFC method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in 10 mM Tris, 150 mM NaCl, 30% ACN with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

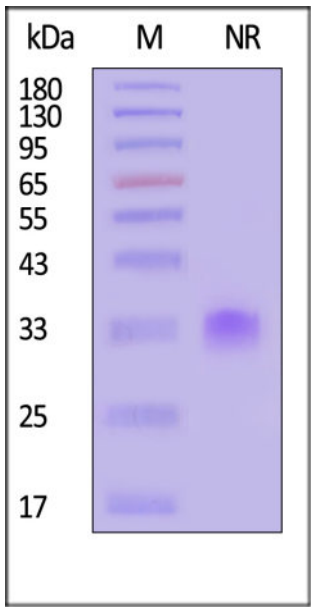
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

ACRO Quality Management System

- QMS(ISO, GMP)

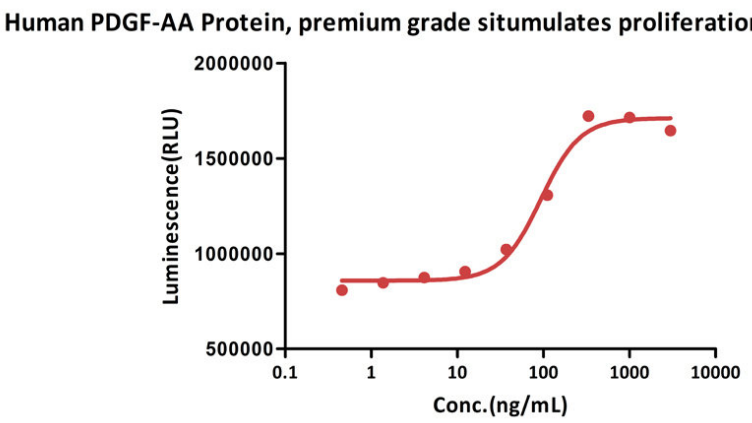
- Quality Advantages
- Quality Control Process

SDS-PAGE



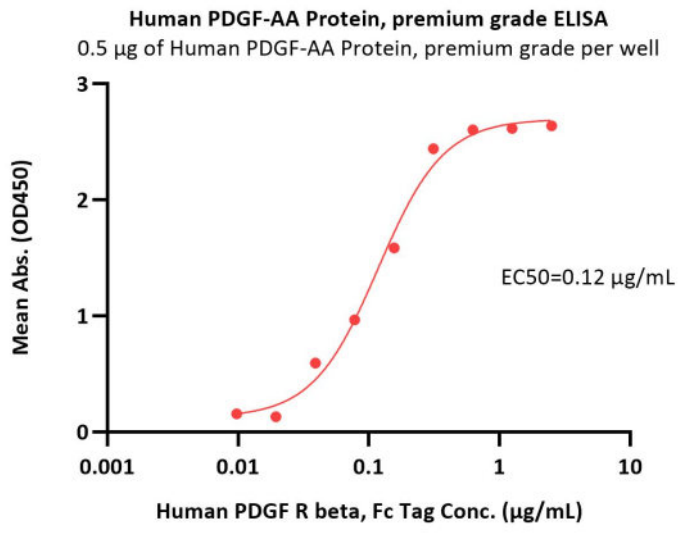
Human PDGF-AA Protein, premium grade on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-CELL BASE



Human PDGF-AA Protein, premium grade (Cat. No. PDA-H5113) situmulates proliferation of NIH-3T3 cells. The EC50 for this effect is 63.47-93.32 ng/mL (Routinely tested).

Bioactivity-ELISA



Immobilized Human PDGF-AA Protein, premium grade (Cat. No. PDA-H5113) at 5 μg/mL (100 μL/well) can bind Human PDGF R beta, Fc Tag (Cat. No. PDB-H5259) with a linear range of 0.01-0.625 μg/mL (QC tested).

Background

PDGFs are mitogenic during early developmental stages, driving the proliferation of undifferentiated mesenchyme and some progenitor populations. During later maturation stages, PDGF signalling has been implicated in tissue remodelling and cellular differentiation, and in inductive events involved in patterning and morphogenesis. In addition to driving mesenchymal proliferation, PDGFs have been shown to direct the migration, differentiation and function of a variety of specialised mesenchymal and migratory cell types, both during development and in the adult animal. Other growth factors in this family include vascular endothelial growth factors B and C (VEGF-B, VEGF-C)which are active in angiogenesis and endothelial cell growth, and placenta growth factor (PlGF) which is also active in angiogenesis. PDGF plays a role in embryonic development, cell proliferation, cell migration, and angiogenesis. PDGF is a required element in cellular division for fibroblast, a type of connective tissue cell. PDGF is also known to maintain proliferation of oligodendrocyte progenitor cells. PDGF can exist either as PDGF-BB or as PDGF-AB or as PDGF-AA where the dimers are connected by disulfide bonds. Mutations in this gene are associated with meningioma.PDGF-AA Protein binds to FDGFR and has the potential to enhance bone healing.