



Platelet-Derived Growth Factor AA, rat recombinant (rrPDGF-AA)

Catalog No: 99939
Lot No: XXXXX
Source: *E. coli*
Synonyms: Platelet-derived growth factor subunit A, PDGF subunit A, PDGF-1, Platelet-derived growth factor A chain, Platelet-derived growth factor alpha polypeptide, Pdgfa, Rpa1

Background

PDGF-AA, PDGF-BB and PDGF-AB are potent mitogens for a variety of cell types including smooth muscle cells, connective tissue cells, bone and cartilage cells, and some blood cells. The PDGF is stored in platelet alpha-granules and released upon platelet activation. It is involved in a number of biological processes, including hyperplasia, chemotaxis, embryonic neuron development and respiratory tubule epithelial cell development. Two distinct signaling receptors used by PDGF have been identified and named PDGFR- α and PDGFR- β . PDGFR- α is a high-affinity receptor for each of the three PDGF forms. On the other hand, PDGFR- β interacts with only PDGF-BB and PDGF-AB.

Description

Platelet-derived Growth Factor AA Human Recombinant is a disulfide-linked homodimer. It consists of two A chains, containing 111 amino acids each and having a total molecular mass of 25.3 kDa. PDGF-AA is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered, white, lyophilized (freeze-dried) powder.

Formulation

PDGF-AA was lyophilized from a 0.2 μ m filtered concentrated solution in PBS (pH 7.0).

Solubility

It is recommended to reconstitute the lyophilized platelet-derived Growth Factor-AA in sterile 4 mM HCl to a concentration of 0.1-1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions.

Stability

Lyophilized Platelet-derived Growth Factor AA, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution PDGF-AA should be stored at 4°C between 2-7 days and for future use 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.

Amino Acid Sequence

MSIEEAIPAV CKTRTVIYEI PRSQVDPTSA NFLIWPPCVE VKRCTGCCNT SSVKCQPSRV HHRSVKVAKV EYVRKKPKLK
EVQVRLEEHL ECACATSNLN PDHREEETDV R

Activity

The ED50, as determined by a cell proliferation assay using murine Balb/c 3T3 cells, is less than 5.0 ng/ml, corresponding to a specific activity of $>2.0 \times 10^5$ IU/mg.

Usage

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