Platelet Derived Growth Factor-AA (PDGF-AA), mouse recombinant (rmPDGF-AA)

Catalog No: 08539
Lot No: XXXXX
Source: *E. coli*
Synonyms: Glioma-derived growth factor, GDGF, Osteosarcoma-derived Growth Factor, ODGF, PDGF-AA, PDGF-1

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. The PDGF 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-alpha and PDGFR-beta. PDGFR-alpha is high-affinity receptor for each of the three PDGF forms. On the other hand, PDGFR-beta interacts with only PDGF-BB and PDGF-AB.

Description

Platelet-Derived Growth Factor AA mouse recombinant produced in *E. coli* is a disulfide linked homodimeric, non-glycosylated, polypeptide chain containing 2 x 126 amino acids and having a total molecular mass of 28.9 kDa. PDGF-AA is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized with no additives.

Solubility

It is recommended to reconstitute the lyophilized PDGF-AA in sterile 18 MΩ-cm H_2O at a concentration ranging between 0.1-0.5 mg per 1 ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized PDGF-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.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

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MSIEEAVPAV CKTRTVIYEI PRSQVDPTSA NFLIWPPCVE VKRCTGCCNT SSVKCQPSRV HHRSVKVAKV EYVRKKPKLK
EVQVRLEEHL ECACATSNLN PDHREEETGR RRESGKNRKR KRLKPT
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Activity

Established by the dose-dependent stimulation of Balb/c 3T3 cells proliferation. The expected ED50 for this effect is 8 - 10 ng/ml corresponding to a specific activity of 100,000 - 125,000 IU/mg.

Usage

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