

Animal-Free | Endotoxin-Free | Carrier-Free

PDGF-BB, human, recombinant

Catalog Number: IK1000

DESCRIPTION

Platelet-derived growth factor-BB (PDGF-BB) is a disulphide-linked homodimer of two B-chains (109 aa each). It is stored in platelet α -granules and is released following activation of platelets. PDGF-BB has potent mitogenic effects on various cell types such as cells of connective tissue, bone and cartilage and smooth muscle. It promotes bone formation and soft tissue repair, stimulating wound healing processes. PDGF-BB is involved in the development of the nervous system and may act as a neuronal regulatory agent via nerve regeneration and proliferation. It also plays a role in the epithelial cell development of the respiratory system, cell migration and angiogenesis.

SOURCE

Produced in the endosperm tissue of barley grain (*Hordeum vulgare*). ISOkine® growth factors and cytokines are animal-free and serum-free and void of antibiotics, endotoxins, viruses, and prions.

FORMULATION

2xPBS pH 7.2, sterile filtered through 0.22 μ m filter.

PURITY

\geq 95% by SDS-PAGE gel analysis.

SHELF LIFE

The lyophilized protein has a shelf life for 3 years when stored at $< 20^{\circ}\text{C}$.

RECONSTITUTION

Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline to a concentration of no less than 100 $\mu\text{g/ml}$. For long term storage of the reconstituted solution, it is recommended to add a carrier protein (0.1% HSA or BSA).

STABILITY

The lyophilized protein, though stable at room temperature for a few weeks, is best stored at -20°C . Reconstituted protein should be used immediately or stored in working aliquots at -20°C . Avoid repeated freeze-thaw cycles.

BIOLOGICAL ACTIVITY

Each batch of ISOkine® growth factors is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkine® recombinant human PDGF-BB is assayed by measuring its dose-dependent effect on the proliferation of 3T3 cells. The ED50 for this effect using PDGF-BB is typically $< 10 \text{ ng/ml}$. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is $< 0.0100 \text{ EU}/\mu\text{g}$ of ISOkine® product by LAL method.

MAT ASSAY

Purified ISOkine® product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction. (Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland.)

MOLECULAR WEIGHT

Recombinant human PDGF-BB contains 109 amino acids and an N-terminal 6 amino acid histidine tag for a total length of 115 amino acids and has a predicted molecular mass of 13.1 kDa.

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