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PDGF-AA

Catalog # PVGS1501

Product Information

Primary Accession	P20033
Species	Mouse
Sequence	Ser87-Thr211, expressed with an N-terminal Met
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	ED_{50}
Expression System	E. coli
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O up to 100 g/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	18590
Other Names	Platelet-derived growth factor subunit A, PDGF subunit A, PDGF-1, Platelet-derived growth factor A chain, Platelet-derived growth factor alpha polypeptide, Pdgfa
Target Background	Platelet-Derived Growth Factor-AA (PDGF-AA) is one of five dimers (PDGF-AA, AB, BB, CC, and DD) formed by 4 different PDGF subunits. In chemical terms, platelet-derived growth factor is a dimeric glycoprotein composed of two A (-AA) or two B (-BB) chains or a combination of the two (-AB). The dimeric isoforms PDGFAA, AB and BB are differentially expressed in various cell types, and their effects are mediated through two distinct receptors termed α and β. Differences exist in isoform binding to each receptor. Ingeneral, PDGF isoforms are potent mitogens for connective tissue cells including dermal fibroblasts, glial cells, arterial smooth muscle cells and some epithelial andendothelial cells. In addition to its activity as a mitogen, PDGF is chemotactic for fibroblasts, smooth muscle cells, neutrophils and mononuclear cells. PDGF-AA plays a significant role in blood vessel formation (angiogenesis).

Protein Information

Name	Pdgfa
Function	Growth factor that plays an essential role in the regulation of embryonic development, cell proliferation, cell migration, survival and chemotaxis. Potent mitogen for cells of mesenchymal origin. Required for normal lung alveolar septum formation during embryogenesis, normal development of the gastrointestinal tract, normal development of Leydig cells and spermatogenesis. Required for normal oligodendrocyte development and normal myelination in the spinal cord and cerebellum. Plays an important role in wound healing. Signaling is modulated by the formation of heterodimers with PDGFB.
Cellular Location	Secreted. Note=Released by platelets upon wounding
Tissue Location	Expression primarily localized in papillary regions with presumable expression in tubular cells comprising the loop of Henle. In the renal cortex, a widespread expression seen in the vascular smooth muscle cells and is barely detectable in interstitial cells.