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Platelet-Derived Growth Factor (PDGF)

100 µl

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):	UniProt ID:	Entrez-Gene Id:
29	#P01127	5155

Background

Platelet-derived growth factor (PDGF) is a dimeric molecule that exists in homodimers or heterodimers of related polypeptide chains (A and B). Two types of PDGF receptors have been identified. The PDGF alpha-receptor binds all three PDGF isoforms with high affinity, whereas the beta-receptor binds only PDGF-BB with high affinity, PDGF-AB with low affinity, and does not appear to bind PDGF-AA (1). Ligand binding induces receptor dimerization and autophosphorylation, allowing binding and activation of cytoplasmic SH2 domain-containing signal transduction molecules. A number of different signaling pathways are then initiated, leading to cell growth, actin reorganization, migration, and differentiation (2-4). In clinical studies, PDGF expression has been demonstrated in a number of different solid tumors, from glioblastomas to prostate carcinomas. In these various tumor types, the biological role of PDGF signaling can vary from autocrine stimulation of cancer cell growth to more subtle paracrine interactions involving adjacent stroma and even angiogenesis. Targeting PDGF signaling is becoming an effective tumor treatment method (5).

Purity

>97%

Source / Purification

Human Recombinant Protein

Bioactivity

1 x 10⁵ IU/mg

Background References

1. Westermark, B. et al. (1990) *Ciba Found. Symp.* 150, 6-22.
2. Heldin, C.H. (1997) *FEBS Lett.* 410, 17-21.
3. Bornfeldt, K.E. et al. (1995) *Ann. N.Y. Acad. Sci.* 766, 416-430.
4. Renhowe, P.A. (2002) *Curr. Opin. Drug Discov. Devel.* 5, 214-224.
5. George, D. (2001) *Semin. Oncol.* 28, 27-33.

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