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Human Platelet-Derived Growth Factor AA (hPDGF-AA)

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

MW (kDa):	UniProt ID:	Entrez-Gene Id:
18	#P04085	5154

Background

PDGF-AA is integrally involved in embryonic development, angiogenesis and organogenesis and induces fibroblast proliferation and migration (1,2). PDGF-AA is produced by epithelial, muscle, osteosarcoma and neuronal progenitor cells (1,3). Active PDGF-AA is formed through intracellular proteolytic cleavage of a large precursor. PDGF-AA is also concentrated in the extracellular matrix through alternative splicing that generates an extended carboxy-terminal that binds components of the extracellular matrix. The carboxy-terminal stretch is removed extracellularly to generate mature PDGF-AA (1,2). PDGF-AA binding to the PDGFR- α activates the receptor tyrosine kinase (1). PDGF-AA-induced signaling is through the Ras-MAPK, PI3K/AKT and PLC γ pathways (1). Dysregulation of PDGF-AA expression and/or signaling is often associated with cancer and fibrotic disorders (1).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g hPDGF-AA.

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hPDGF-AA. All lots are greater than 98% pure.

Source / Purification

Recombinant human PDGF-AA (hPDGF-AA) Ser87-Thr211 (Accession #NP_002598) was produced in *E. coli* at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant hPDGF-AA was determined in a NIH/3T3 proliferation assay. The ED₅₀ of each lot is between 4-12 ng/ml.

Background References

- Andrae, J. et al. (2008) *Genes Dev* 22, 1276-312.
- Hoch, R.V. and Soriano, P. (2003) *Development* 130, 4769-84.
- Siegbahn, A. et al. (1990) *J Clin Invest* 85, 916-20.

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