Revision 2

#42028 Store at -20C

Human PDGF-AA Recombinant Protein

10 µg

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
28.9	#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 extracellular matrix components. The carboxy-terminal stretch is removed extracellularly to generate mature PDGF-AA (1,2). PDGF-AA binding to PDGFR-α activates the receptor tyrosine kinase (1). PDGF-AA-induced signaling is through the Ras-MAPK, PI3K/Akt, and PLCγ pathways (1). Dysregulation of PDGF-AA expression and/or signaling is often associated with cancer and fibrotic disorders (1).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hPDGF-AA.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human PDGF-AA was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hPDGF-AA was determined in an NR6R-3T3 cell proliferation assay. The ED_{50} of each lot is less than or equal to 50 ng/mL.

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Background References

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

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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