

Recombinant Human PDGF-AA Protein

Catalog Number: TL-743

Product name

Generic names	Recombinant Human PDGF-AA Protein
Gene Name Synonym	Platelet-derived Growth Factor-AA, Glioma-derived Growth Factor (GDGF), Osteosarcoma-derived Growth Factor (ODGF) .

Product information

Construction	A DNA sequence encoding the human PDGF-AA (NP_002598.4) was expressed with the C-terminal fused Fc region of human IgG1.
Source	Human
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Bio Activity	The ED ₅₀ as determined by the dose-dependent stimulation of thymidine uptake by Balb/c 3T3 cells is ≤ 2 ng/ml.
Endotoxin	< 0.1EU per µg of the protein as determined by the LAL method.
Molecular Mass	The recombinant human PDGF-AA consists of 358 amino acids and predicts a molecular mass of 41.2 KDa.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % - 8 % trehalose, mannitol are added as protectants before lyophilization.
Stability & Storage	Samples are stable for up to 24 months from date of receipt at 4 °C. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.

Background

PDGFs are disulfide-linked dimers consisting of two 12.0-13.5 kDa polypeptide chains, designated PDGF-A and PDGF-B chains. The three naturally occurring PDGFs, PDGF-AA, PDGF-BB and PDGF-AB, are potent mitogens for a variety of cell types, including smooth muscle cells, connective tissue cells, bone and cartilage cells, and some blood cells. The PDGFs are stored in platelet α -granules, and are released upon platelet activation. The PDGFs are involved in a number of biological processes, including hyperplasia, chemotaxis, embryonic neuron development, and respiratory tubule epithelial cell development. Two distinct signaling receptors used by PDGFs have been identified and named PDGFR- α and PDGFR- β . PDGFR- α is a high-affinity receptor for each of the three PDGF forms. On the other hand, PDGFR- β interacts with only PDGF-BB and PDGF-AB.

References

1. Selective estrogen receptor modulators enhance CNS remyelination independent of estrogen receptors KA Rankin, F Mei, K Kim, YA Shen, SR Mayoral, C Desponts, DS Lorrain, AJ Green, SE Baranzini, JR Chan, R Bove; J. Neurosci., 2019;0(0).
2. Human ESC-Derived Chimeric Mouse Models of Huntington's Disease Reveal Cell-Intrinsic Defects in Glial Progenitor Cell Differentiation; M Osipovitch, A Asenjo Mar, JN Mariani, A Cornwell, S Dhaliwal, L Zou, D Chandler-M, S Wang, X Li, SJ Benraiss, R Agate, A Lampp, A Benraiss, MS Windrem, SA Goldman; Cell Stem Cell, 2018;0(0).