

TECHNICAL DATA SHEET

Recombinant Human PDGF-AA (Carrier-free)

Catalog Number: 21-7080

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

CONTENTS

Recombinant Human PDGF-AA (Carrier-free)

DESCRIPTION

Platelet-derived growth factor-AA (PDGF-AA) is one of the five dimeric proteins belonging to the PDGF family. Other members are homodimers PDGF-BB, PDGF-CC, PDGF-DD, and the heterodimer PDGF-AB. The PDGFs are produced by platelets, stored in platelet alpha-granules and are released upon platelet activation. PDGF proteins are generally considered as potent mitogens for connective tissue cells, and can also be chemotactic for fibroblasts, smooth muscle cells, neutrophils and mononuclear cells. PDGF-AA is well known as a potent mitogen for the proliferation of oligodendrocyte progenitor cells (OPCs). Two receptors have been identified for the PDGF proteins – PDGFR alpha and PDGFR beta. PDGF-AA binds to PDGFR alpha, but not PDGFR beta which appears to be specific for PDGF-BB and PDGF-AB.

MOLECULAR MASS

Recombinant human PDGF-AA is a 28.5 kDa disulfide-linked homodimer of two A chains (250 total amino acids).

AMINO ACID SEQUENCE

SIEEAVPAVC KTRTVIYEIP RSQVDPTSAN FLIWPPCVEV KRCTGCCNTS SVKQCPSRVH HRSVKVAKVE YVRKKPKLKE VQVRLEEHL E CACATSLNP DYREEDTGRP RESGKKRKRK RLKPT

SOURCE

E. coli

APPLICATIONS

Bioassay

PURITY

98 %

STORAGE

-20°C

PROTEIN CONTENT

Content Verified by UV Spectroscopy and/or SDS-PAGE

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

Dog, Monkey, Mouse, Rat

BIOACTIVITY

The ED₅₀ as determined by the dose-dependent stimulation of thymidine uptake by Balb/c 3T3 cells is ≤ 1 ng/ml, corresponding to a specific activity of ≥ 1 x 10⁶ units/mg.

RESEARCH AREAS

Angiogenesis/Cardiovascular; Bone, Skeletal, Cartilage; Cancer; Immune System; Neurobiology; Wound Healing; Stem Cells & Differentiation

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Fredriksson L, Li H and Eriksson U. 2004. Cytokine Growth Factor Rev. 15(4): 197-204. Heldin CH and Westermark B. 1999. Physiol Rev. 79(4): 1283-1316. Hu JG, Wang YX, Wang JG, Bao MS, Wang ZH, Ge X, Wang FC, Zhou JS and Lu HZ. 2012. J Mol Neurosci. 46(3): 644-653. Anand-Apte B and Zetter B. 1997. Stem Cells. 15(4): 259-267. Siegbahn A, Hammacher A, Westermark B and Heldin CH. 1990. J Clin Invest. 85(3): 916-920.

Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.

For Research Use Only.

Not for use in diagnostic or therapeutic procedures. Not for resale. Not for distribution without written consent. Tonbo Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Tonbo Biosciences, Tonbo Biosciences Logo and all other trademarks are the property of Tonbo Biotechnologies Corporation. © 2013 Tonbo Biosciences.