

# Recombinant Rat PDGFRA/CD140a Protein (His Tag)

Catalog Number:PKSR030167



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

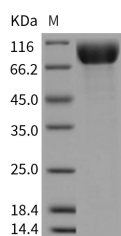
## Description

|                                    |              |
|------------------------------------|--------------|
| <b>Synonyms</b>                    | PDGFRA       |
| <b>Species</b>                     | Rat          |
| <b>Expression Host</b>             | HEK293 Cells |
| <b>Sequence</b>                    | Met1-Glu523  |
| <b>Accession</b>                   | NP_036934.1  |
| <b>Calculated Molecular Weight</b> | 57.6 kDa     |
| <b>Observed molecular weight</b>   | 70-110 kDa   |
| <b>Tag</b>                         | C-His        |

## Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 95 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| <b>Formulation</b>    | Lyophilized from sterile PBS, pH 7.4<br>Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual.           |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.  |

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

PDGFRA, also known as CD140a, together with the structurally homolog protein PDGFRB (CD140b), are cell surface receptors for members of the platelet-derived growth factor family. They are members of the class III subfamily of receptor tyrosine kinase (RTKs) with the similar structure characteristics of five immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. PDGFRA is expressed in oligodendrocyte progenitor cells and mesothelial cell, and binds all three ligand isoforms PDGF-AA, PDGF-BB and PDGF-AB with high affinity, whereas PDGFRB dose not bind PDGF-AA. PDGFRA plays an essential role in regulating proliferation, chemotaxis and migration of mesangial cells. Recent studies have indicated that PDGFRA acts as a critical mediator of signaling in testis organogenesis and Leydig cell differentiation, and in addition, particularly important for kidney

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development. Additionally, PDGFRA is involved in tumor angiogenesis and maintenance of the tumor microenvironment and has been implicated in development and metastasis of Hepatocellular carcinoma (HCC). PDGFRA may represent a potential therapeutic target in thymic tumours. PDGFRA gene amplification rather than gene mutation may be the underlying genetic mechanism driving PDGFRA overexpression in a portion of gliomas.

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