



# Recombinant Protein Technical Manual

**Recombinant Human PDGFR $\alpha$ /CD140a Protein (Fc Tag)(Active)**  
RPES3778

## Product Data:

**Product SKU:** RPES3778

**Size:** 50 $\mu$ g

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_006197.1

## Protein Information:

**Molecular Mass:** 82.9 kDa

**AP Molecular Mass:** 12030 kDa

**Tag:** C-Fc

**Bio-activity:** 1. Measured by its ability to bind human PDGF-C in a functional ELISA. 2. Measured by its ability to bind mouse PDGF-C in a functional ELISA.

**Purity:** > 90 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per  $\mu$ g as determined by the LAL method.

**Storage:** 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.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** CD140A; PDGFR-2; PDGFR2; RHEPDGFRA; Platelet-derived growth factor receptor alpha; PDGFR-alpha; Alpha platelet-derived growth factor receptor; CD140 antigen-like family member A; Platelet-derived growth factor alpha receptor; Platelet-derived growth factor receptor 2

## Immunogen Information:

**Sequence:** Met 1-Glu 524

## 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 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.