

## PDGFR beta monoclonal antibody

Catalog: MB66854

Host: Mouse

Reactivity: Mouse

### BackGround:

Tyrosine-protein kinase that acts as cell-surface receptor for homodimeric PDGFB and PDGFD and for heterodimers formed by PDGFA and PDGFB, and plays an essential role in the regulation of embryonic development, cell proliferation, survival, differentiation, chemotaxis and migration. Plays an essential role in blood vessel development by promoting proliferation, migration and recruitment of pericytes and smooth muscle cells to endothelial cells. Plays a role in the migration of vascular smooth muscle cells and the formation of neointima at vascular injury sites. Required for normal development of the cardiovascular system. Required for normal recruitment of pericytes (mesangial cells) in the kidney glomerulus, and for normal formation of a branched network of capillaries in kidney glomeruli. Promotes rearrangement of the actin cytoskeleton and the formation of membrane ruffles. Binding of its cognate ligands - homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFD -leads to the activation of several signaling cascades; the response depends on the nature of the bound ligand and is modulated by the formation of heterodimers between PDGFRA and PDGFRB. Phosphorylates PLCG1, PIK3R1, PTPN11, RASA1/GAP, CBL, SHC1 and NCK1. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, mobilization of cytosolic Ca<sup>2+</sup> and the activation of protein kinase C. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to the activation of the AKT1 signaling pathway. Phosphorylation of SHC1, or of the C-terminus of PTPN11, creates a binding site for GRB2, resulting in the activation of HRAS, RAF1 and down-stream MAP kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes phosphorylation and activation of SRC family kinases. Promotes phosphoryla-

tion of PDCD6IP/ALIX and STAM. Receptor signaling is down-regulated by protein phosphatases that dephosphorylate the receptor and its down-stream effectors, and by rapid internalization of the activated receptor.

### Product:

Mouse IgG1 kappa. Supplied in crude ascites with 0.01% sodium azide.

### Molecular Weight:

~ 190 kDa

### Swiss-Prot:

P05622

### Purification&Purity:

### Applications:

WB (1/500 - 1/4000)

### Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

### Specificity:

Recognizes endogenous levels of PDGFR beta protein.

### DATA:



Western blot analysis of PDGFR beta expression in NIH3T3 (A) whole cell lysates.

### Note:

For research use only, not for use in diagnostic procedure.

### Bioworld Technology, Inc.

Add: 1660 South Highway 100, Suite 500 St. Louis Park, MN 55416, USA.

Email: [info@bioworld.com](mailto:info@bioworld.com)

Tel: 6123263284

Fax: 6122933841

### Bioworld technology, co. Ltd.

Add: No 9, weidi road Qixia District Nanjing, 210046, P. R. China.

Email: [info@biogot.com](mailto:info@biogot.com)

Tel: 0086-025-68037686

Fax: 0086-025-68035151



## PRODUCT DATA SHEET

Bioworld Technology, Inc.

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### **Bioworld Technology, Inc.**

**Add:** 1660 South Highway 100, Suite 500 St. Louis Park,  
MN 55416, USA.

**Email:** [info@bioworld.com](mailto:info@bioworld.com)

**Tel:** 6123263284

**Fax:** 6122933841

### **Bioworld technology, co. Ltd.**

**Add:** No 9, weidi road Qixia District Nanjing, 210046,  
P. R. China.

**Email:** [info@biogot.com](mailto:info@biogot.com)

**Tel:** 0086-025-68037686

**Fax:** 0086-025-68035151