# biotechne

## Human PDGF Rβ Antibody

Monoclonal Mouse IgG<sub>1</sub> Clone # PR7212 Catalog Number: MAB1263

**R**DSYSTEMS

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human PDGF Rβ in Western blots. Specificity has been confirmed in binding studies using several different cell lines (1, 2) and by its ability to immunoprecipitate PDGF receptor β-subunit complexed with <sup>125</sup> I-PDGF-BB (3). It does not recognize the PDGF receptor α-subunit. Detects the PDGF receptor β-subunit of human and primate species (monkey and baboon) but not the rat or mouse receptors. Its ability to bind to receptors from other species has not been tested.	
Source	Monoclonal Mouse IgG <sub>1</sub> Clone # PR7212	
Purification	Protein A or G purified from ascites	
Immunogen	Human skin fibroblast membrane extracts	
Formulation	Supplied as a 0.2 µm filtered solution in PBS.	

#### APPLICATIONS

 Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

 Recommended Concentration
 Sample

 Western Blot
 1 μg/mL
 Recombinant Human PDGF Rβ Fc Chimera (Catalog # 385-PR)

Flow Cytometry	0.25 μg/10 <sup>6</sup> cells	MG-63 human osteosarcoma cell line
Immunoprecipitation	Gronwald et al. (1988) Proc. Natl. Acad. Sci. 85:3435.	



- 1 month, 2 to 8 °C under sterile conditions after opening
- 6 months, -20 to -70 °C under sterile conditions after opening.

#### BACKGROUND

PDGF is a major serum mitogen that can exist as a homo or hetero-dimeric protein consisting of disulfide-linked PDGF-A and PDGF-B chains. The PDGF-AA, PDGF-BB and PDGF-AB isoforms have been shown to bind to two distinct cell surface PDGF receptors with different affinities. Where as PDGF R $\alpha$  binds all three PDGF isoforms with high affinity, PDGF R $\beta$  binds PDGF-BB only with high-affinity. Both PDGF R $\alpha$  and PDGF R $\beta$  are members of the class III subfamily of receptor tyrosine kinases (RTK) that also includes the receptors for M-CSF, SCF and FI3 ligand. All class III RTKs are characterized by the presence of five immuno-globulinlike domains in their extracellular region and a split kinase domain in their intracellular region. PDGF binding induces receptor homo-and hetero-dimerization and affinity and is potent PDGF antagonist (4).

#### References:

- 1. Hart et al. (1987) J. Biol. Chem. 262:10780.
- 2. Gronwald et al. (1988) Proc. Natl. Acad. Sci. 85:3435.
- 3. Seifert et al. (1989) J. Biol. Chem. 264:8771.
- 4. Heldin, C.H. and L. Claesson-Welsh (1994) in Guidebook to Cytokines and Their Receptors, Nicola, N.A. ed. Oxford University Press, New York, p. 202.

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