

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human PDGF R $\beta$ 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 $\beta$ -subunit complexed with <sup>125</sup> I-PDGF-BB (3). It does not recognize the PDGF receptor $\alpha$ -subunit. Detects the PDGF receptor $\beta$ -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.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # PR7212
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	Human skin fibroblast membrane extracts
<b>Conjugate</b>	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

#### 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	0.25-1 $\mu$ g/10 <sup>6</sup> cells	BUD-8 human fibroblast cell line

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> ● 12 months from date of receipt, 2 to 8 °C as supplied.

#### 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 Flt3 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 signal transduction. The expression of the  $\alpha$  and  $\beta$  receptors is independently regulated in various cell types. Recombinant soluble PDGF R $\beta$  binds PDGF with high affinity and is potent PDGF antagonist (4).

#### References:

- Hart *et al.* (1987) J. Biol. Chem. **262**:10780.
- Gronwald *et al.* (1988) Proc. Natl. Acad. Sci. **85**:3435.
- Seifert *et al.* (1989) J. Biol. Chem. **264**:8771.
- 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.

#### PRODUCT SPECIFIC NOTICES

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