

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human PDGF R $\alpha$ . Recognizes the PDGF receptor $\alpha$ -subunit; it does not recognize the PDGF receptor $\beta$ -subunit. Binds to the PDGF receptor $\alpha$ -subunit of primate species (human, monkey, baboon) and dog. Does not recognize rat or mouse receptors and its ability to bind to receptors from other species has not been tested.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # PRa292
<b>Purification</b>	Protein A or G purified from ascites
<b>Immunogen</b>	Human osteosarcoma cell membrane extracts
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

	Recommended Concentration	Sample
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	U-118-MG human glioblastoma/astrocytoma 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> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### BACKGROUND

PDGF is a major serum mitogen that can exist as a homo- or heterodimeric 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. Whereas PDGF R $\alpha$  binds all three PDGF isoforms with high affinity, PDGF R $\beta$  binds PDGF-BB and AB, but not PDGF-AA. 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 immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. PDGF binding induces receptor homo- and heterodimerization and signal transduction. The expression of the  $\alpha$  and  $\beta$  receptors is independently regulated in various cell types. Only PDGF R $\alpha$  is expressed in oligodendrocyte progenitor cells, mesothelial cell and liver endothelial cells. Soluble PDGF-R $\alpha$  has been detected in cell conditioned medium and human plasma. Recombinant soluble PDGF R $\alpha$  binds PDGF with high affinity and is a potent PDGF antagonist (1).

#### References:

- Heldin, C.H. and L. Claesson-Welsh (1994) *Guidebook to Cytokines and Their Receptors*, Nicola, N.A. (ed) Oxford University Press, New York, NY p. 202.

#### PRODUCT SPECIFIC NOTICES

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