

## DESCRIPTION

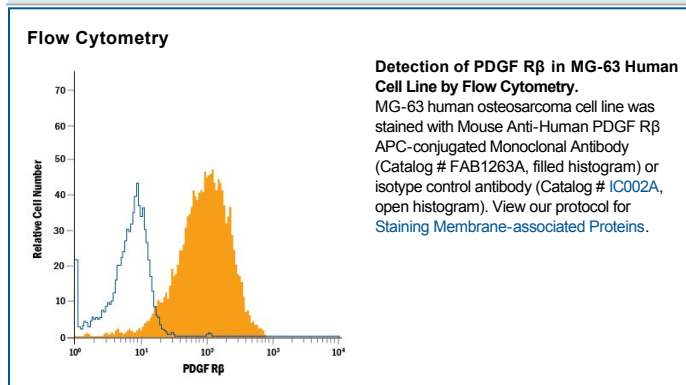
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human PDGF R $\beta$ in Western blots. Specificity has been confirmed in binding studies using several different cell lines (1, 2) and by its ability to immunoprecipitate PDGF Receptor $\beta$ -subunit complexed with <sup>125</sup> I-PDGF-BB (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>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied 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>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** **Protect from light. Do not freeze.**

- 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 immunoglobulin-like 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 a 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.