

DESCRIPTION

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| Species Reactivity | Human |
| Specificity | Detects human PDGF R β 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 ¹²⁵ 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 ₁ Clone # PR7212 |
| Purification | Protein A or G purified from ascites |
| Immunogen | Human skin fibroblast membrane extracts |
| Conjugate | Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm |
| Formulation | 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 |
|-----------------------|--------------------------------------|----------------------------------|
| Flow Cytometry | 0.25-1 μ g/10 ⁶ cells | BUD-8 human fibroblast cell line |

PREPARATION AND STORAGE

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| 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 α binds all three PDGF isoforms with high affinity, PDGF R β binds PDGF-BB only with high-affinity. Both PDGF R α and PDGF R β 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 α and β receptors is independently regulated in various cell types. Recombinant soluble PDGF R β 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.

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