

DESCRIPTION

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
Formulation	Supplied as a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

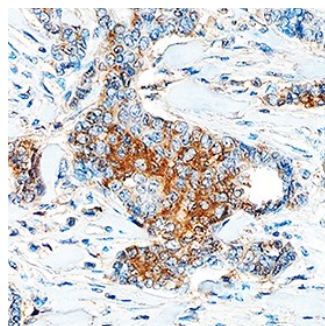
APPLICATIONS

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 μ g/mL	Recombinant Human PDGF R β Fc Chimera (Catalog # 385-PR)
Flow Cytometry	2.5 μ g/10 ⁶ cells	BUD-8 human fibroblast cell line
Immunohistochemistry	8-25 μ g/mL	See Below
Immunoprecipitation	Gronwald <i>et al.</i> (1988) Proc. Natl. Acad. Sci. 85 :3435.	

DATA

Immunohistochemistry



PDGF R β in Human Breast Cancer Tissue. PDGF R β was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Mouse Anti-Human PDGF R β Monoclonal Antibody (Catalog # MAB1263) at 15 μ g/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in cancer cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C, as supplied. ● 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 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 immunoglobulinlike 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:

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.