

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PDGF R α . Recognizes the PDGF receptor α -subunit; it does not recognize the PDGF receptor β -subunit. Binds to the PDGF receptor α -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.
Source	Monoclonal Mouse IgG ₁ Clone # PRa292
Purification	Protein A or G purified from ascites
Immunogen	Human osteosarcoma cell 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
Flow Cytometry	2.5 μ g/10 ⁶ cells	U-118-MG human glioblastoma/astrocytoma cell line
Immunoprecipitation	25 μ g/mL	Conditioned cell culture medium spiked with Recombinant Human PDGF R α (Catalog # 322-PR), see our available Western blot detection antibodies

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 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 α binds all three PDGF isoforms with high affinity, PDGF R β binds PDGF-BB and AB, but not PDGF-AA. 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 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 α and β receptors is independently regulated in various cell types. Only PDGF R α is expressed in oligodendrocyte progenitor cells, mesothelial cell and liver endothelial cells. Soluble PDGF-R α has been detected in cell conditioned medium and human plasma. Recombinant soluble PDGF R α binds PDGF with high affinity and is a potent PDGF antagonist (1).

References:

1. 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.