Species Reactivity: Human

Specificity: Detects human PDGF Rα. 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 IgG1 Clone # PRa292

Purification: Protein A or G purified from ascites

Immunogen: Human osteosarcoma cell membrane extracts

Conjugate: Allophycocyanin

Excitation Wavelength: 620-650 nm

Emission Wavelength: 660-670 nm

Formulation: 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

Flow Cytometry

10 µL/10^6 cells

See Below

DATA

Flow Cytometry

Detection of PDGF Rα in U-118-MG Human Cell Line by Flow Cytometry. U-118-MG human glioblastoma/astrocytoma cell line was stained with Mouse Anti-Human PDGF Rα APC-conjugated Monoclonal Antibody (Catalog # FAB1264A, filled histogram) or isotype control antibody (Catalog # IC002A, open histogram). View our protocol for Staining Membrane-associated Proteins.

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 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 Rα binds all three PDGF isoforms with high affinity, PDGF Rβ binds PDGF-BB and AB, but not PDGF-AA. Both PDGF Rα and PDGF Rβ 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 Rα is expressed in oligodendrocyte progenitor cells, mesothelial cell and liver endothelial cells. Soluble PDGF-Rα has been detected in cell conditioned medium and human plasma. Recombinant soluble PDGF Rα binds PDGF with high affinity and is a potent PDGF antagonist (1).

References: