

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat PDGF-AA in direct ELISAs and Western blots. In direct ELISAs, 5-35% cross-reactivity with recombinant rat (rr) PDGF-AB, recombinant human (rh) PDGF-AA, and rhPDGF-AB is observed and no cross-reactivity with rrPDGF-BB, rhPDGF-BB.
Source	Monoclonal Mouse IgG _{2B} Clone # 184805
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant rat PDGF-AA Ser87-Arg196 Accession # AAB59693
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

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

The platelet-derived growth factor (PDGF) family consists of proteins derived from four genes (PDGF-A, -B, -C, and -D) that form four disulfide-linked homodimers (PDGF-AA, -BB, -CC, and -DD) and one heterodimer (PDGF-AB) (1, 2). These proteins regulate diverse cellular functions by binding to and inducing the homo- or hetero-dimerization of two receptors (PDGF R α and R β). Whereas α/α homo-dimerization is induced by PDGF-AA, -BB, -CC, and -AB, α/β hetero-dimerization is induced by PDGF-AB, -BB, -CC, and -DD, and β/β homo-dimerization is induced only by PDGF-BB, and -DD (1-4). Both PDGF R α and R β are members of the class III subfamily of receptor tyrosine kinases (RTK) that have five immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. Ligand-induced receptor dimerization results in autophosphorylation in trans resulting in the activation of several intracellular signaling pathways that can lead to cell proliferation, cell survival, cytoskeletal rearrangement, cell migration and extracellular matrix production. Rat PDGF-A chain cDNA encodes a 204 amino acid (aa) residue precursor protein with a 20 aa signal peptide, a 65 aa propeptide that is removed by proteolysis, and a 119 aa mature protein. By alternative splicing, a short form lacking 8 C-terminal aa residues also exists. The long form contains the 8 aa basic insert which promotes intracellular cell retention and association with cell matrix. PDGF-A is expressed in multiple cell types and tissues. Based on PDGF-A knockout studies, PDGF-A appears to be important for the development of oligodendrocytes, testicular Leydig cells, alveolar smooth muscle cells, hair follicles and intestinal villus (1).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.