

#### DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse PDGF R $\beta$ in direct ELISAs and Western blots. In direct ELISAs, this antibody shows approximately 35% cross-reactivity with recombinant human PDGF R $\beta$ .
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse PDGF R $\beta$ Leu32-Lys530 Accession # P05622
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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.

<b>Western Blot</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Immunohistochemistry</b>	Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	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 disulfide-linked homodimers (PDGF-AA, -BB, -CC, and -DD) and a 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 $\alpha$  and R $\beta$ ). Whereas  $\alpha/\alpha$  homo-dimerization is induced by PDGF-AA, -BB, -CC, and -AB,  $\alpha/\beta$  hetero-dimerization is induced by PDGF-AB, -BB, -CC, and -DD, and  $\beta/\beta$  homo-dimerization is induced only by PDGF-BB, and -DD (1 - 4). Both PDGF R $\alpha$  and R $\beta$  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. 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, and cell migration. Many cell types, including fibroblasts and smooth muscle cells, express both the  $\alpha$  and  $\beta$  receptors. Others have only the  $\alpha$  receptors (oligodendrocyte progenitor cells, mesothelial cells, liver sinusoidal endothelial cells, astrocytes, platelets and megakaryocytes) or only the  $\beta$  receptors (myoblasts, capillary endothelial cells, pericytes, T cells, myeloid hematopoietic cells and macrophages). A soluble PDGF R $\alpha$  has been detected in normal human plasma and serum as well as in the conditioned medium of the human osteosarcoma cell line MG-63 (5). Both the recombinant mouse and human soluble PDGF R $\alpha$  bind PDGF with high affinity and are potent PDGF antagonists.

#### PRODUCT SPECIFIC NOTICES

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