

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human PDGF R $\beta$ when phosphorylated at Y751 in Western blots.
<b>Source</b>	Polyclonal Rabbit IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Phosphopeptide containing human PDGF R $\beta$ Y751 site
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 $\mu$ 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.5 $\mu$ g/mL	See Below
<b>Simple Western</b>	5 $\mu$ g/mL	See Below

## DATA

**Western Blot**

**Detection of Human Phospho-PDGF R $\beta$  (Y751) by Western Blot.** Western blot shows lysates of human foreskin fibroblast untreated (-) or treated (+) with 100 ng/mL Recombinant Human PDGF-AA, PDGF-AB, and PDGF-BB (Catalog # 221-AA, 222-AB, and 220-BB, respectively) for 10 minutes. PVDF membrane was probed with 0.5  $\mu$ g/mL of Rabbit Anti-Human Phospho-PDGF R $\beta$  (Y751) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1767), followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for Phospho-PDGF R $\beta$  (Y751) at approximately 185 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Simple Western**

**Detection of Human Phospho-PDGF R $\beta$  (Y751) by Simple Western™.** Simple Western lane view shows lysates of CCD-1070Sk human foreskin fibroblast cell line untreated (-) or treated (+) with 100 ng/mL Recombinant Human PDGF-AA (Catalog # 221-AA) for 10 minutes, loaded at 0.2 mg/mL. A specific band was detected for Phospho-PDGF R $\beta$  (Y751) at approximately 274 kDa (as indicated) using 5  $\mu$ g/mL of Rabbit Anti-Human Phospho-PDGF R $\beta$  (Y751) Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1767). This experiment was conducted under reducing conditions and using the 66-440 kDa separation system.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. 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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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 $\alpha$  binds all three PDGF isoforms with high affinity, PDGF R $\beta$  binds PDGF-BB only with high-affinity. Both PDGF R $\alpha$  and PDGF 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. PDGF binding induces receptor homo- and hetero-dimerization and signal transduction. The expression of the  $\alpha$  and  $\beta$  receptors is independently regulated in various cell types. Recombinant soluble PDGF R $\beta$  binds PDGF with high affinity and is potent PDGF antagonist.

## References:

1. 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.