

## DESCRIPTION

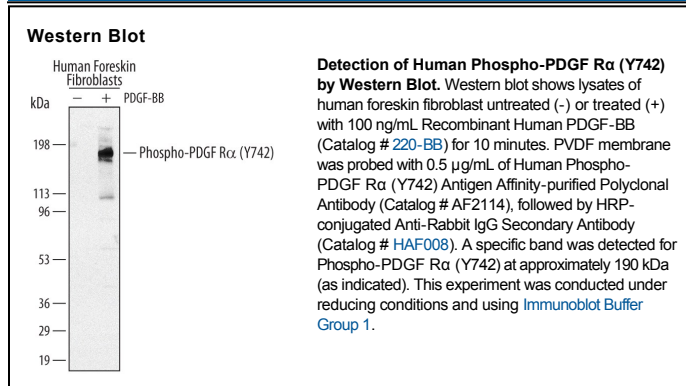
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human PDGF R $\alpha$ when phosphorylated at Y742.
<b>Source</b>	Polyclonal Rabbit IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Phosphopeptide containing human PDGF R $\alpha$ Y742 site
<b>Formulation</b>	Lyophilized from 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>Immunohistochemistry</b>	5-15 $\mu$ g/mL	Immersion fixed paraffin-embedded sections of human breast cancer tissue subjected to Antigen Retrieval Reagent-Basic (Catalog # <a href="#">CTS013</a> )

## DATA



## 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 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 $\alpha$  binds all three PDGF isoforms with high affinity, PDGF R $\beta$  binds PDGF-BB and AB, but not PDGF-AA. 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 heterodimerization and signal transduction. The expression of the  $\alpha$  and  $\beta$  receptors is independently regulated in various cell types. Only PDGF R $\alpha$  is expressed in oligodendrocyte progenitor cells, mesothelial cell and liver endothelial cells. Soluble PDGF-R $\alpha$  has been detected in cell conditioned medium and human plasma. Recombinant soluble PDGF R $\alpha$  binds PDGF with high affinity and is a potent PDGF antagonist (1).

## References:

- 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.