

# p-PDGFR- $\beta$ (Tyr 1009): sc-12908

## BACKGROUND

Platelet derived growth factor (PDGF) is a mitogen for mesenchyme- and gliaderived cells. PDGF consists of two chains, A and B, which dimerize to form functionally distinct isoforms, PDGF-AA, PDGF-AB, and PDGF-BB. These three isoforms bind with different affinities to two receptor types,  $\alpha$  and  $\beta$ , which are endowed with protein tyrosine kinase domains and undergo either homo- or heterodimerization as a consequence of ligand binding. Ligand stimulation of PDGFR- $\beta$  leads to autophosphorylation at Tyr 857, which is the major autophosphorylation site, and Tyr 751, which is the major *in vitro* phosphorylation site. Autophosphorylation of Tyr 751, which lies in the kinase insert region, is required for binding of phosphatidylinositol-3 kinase to the receptor. These autophosphorylation events largely contribute to signal transduction through the PDGF receptor.

## CHROMOSOMAL LOCATION

Genetic locus: PDGFRB (human) mapping to 5q32; Pdgfrb (mouse) mapping to 18 E1.

## SOURCE

p-PDGFR- $\beta$  (Tyr 1009) is available as either goat (sc-12908) or rabbit (sc-12908-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 1009 phosphorylated PDGFR- $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12908 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-PDGFR- $\beta$  (Tyr 1009) is recommended for detection of Tyr 1009 phosphorylated PDGFR- $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-PDGFR- $\beta$  (Tyr 1009) is also recommended for detection of correspondingly phosphorylated PDGFR- $\beta$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDGFR- $\beta$  siRNA (h): sc-29442, PDGFR- $\beta$  siRNA (m): sc-36200, PDGFR- $\beta$  shRNA Plasmid (h): sc-29442-SH, PDGFR- $\beta$  shRNA Plasmid (m): sc-36200-SH, PDGFR- $\beta$  shRNA (h) Lentiviral Particles: sc-29442-V and PDGFR- $\beta$  shRNA (m) Lentiviral Particles: sc-36200-V.

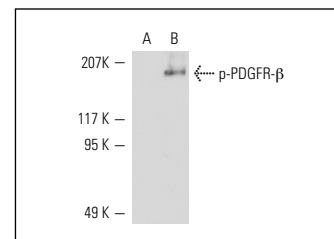
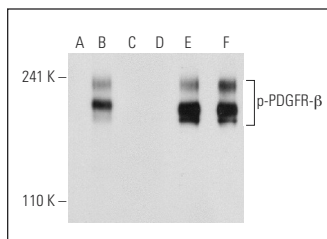
Molecular Weight of p-PDGFR- $\beta$ : 190 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Hep G2 + TGF $\beta$  cell lysate: sc-24702 or CCD-1064Sk + PDGF cell lysate: sc-2264.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Western blot analysis of PDGFR- $\beta$  phosphorylation in non-transfected: sc-117752 (A, D), untreated human PDGFR- $\beta$  transfected: sc-159386 (B, E) and lambda protein phosphatase (sc-200312A) treated human PDGFR- $\beta$  transfected: sc-159386 (C, F) 293T whole cell lysates. Antibodies tested include p-PDGFR- $\beta$  (Tyr 1009)-R: sc-12908-R (A, B, C) and PDGFR- $\beta$  (11H4): sc-80991 (D, E, F).

Western blot analysis of PDGFR- $\beta$  phosphorylation in control (A) and PDGF-BB stimulated (B) CCD-1064Sk whole cell lysates.

## SELECT PRODUCT CITATIONS

- Mahon, E.S., et al. 2005. A-Raf associates with and regulates platelet-derived growth factor receptor signalling. *Cell. Signal.* 17: 857-868.
- Reddi, A.L., et al. 2007. Binding of Cbl to a phospholipase C $\gamma$ 1-docking site on platelet-derived growth factor receptor  $\beta$  provides a dual mechanism of negative regulation. *J. Biol. Chem.* 282: 29336-29347.
- Fürst, R., et al. 2010. The *Crataegus* extract WS 1442 inhibits balloon catheter-induced intimal hyperplasia in the rat carotid artery by directly influencing PDGFR- $\beta$ . *Atherosclerosis* 211: 409-417.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **p-PDGFR- $\beta$  (H-8): sc-373805**, our highly recommended monoclonal alternative to p-PDGFR- $\beta$  (Tyr 1009).