

# p-PDGFR- $\beta$ (H-8): sc-373805

## BACKGROUND

Platelet derived growth factor (PDGF) is a mitogen for mesenchyme- and glia-derived 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 auto-phosphorylation events largely contribute to signal transduction through the PDGF receptor.

## REFERENCES

- Ross, R., et al. 1986. The biology of platelet-derived growth factor. *Cell* 46: 155-169.
- Hart, C.E., et al. 1988. Two classes of PDGF receptor recognize different isoforms of PDGF. *Science* 240: 1529-1531.
- Heldin, C., et al. 1988. Binding of different dimeric forms of PDGF to human fibroblasts: evidence for two separate receptor types. *EMBO J.* 7: 1387-1393.
- Kazlauskas, A. and Cooper, J.A. 1989. Autophosphorylation of the PDGF receptor in the kinase insert region regulates interactions with cell proteins. *Cell* 58: 1121-1133.

## CHROMOSOMAL LOCATION

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

## SOURCE

p-PDGFR- $\beta$  (H-8) is a mouse monoclonal antibody epitope corresponding to a short amino acid sequence containing Tyr 1009 phosphorylated PDGFR- $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-PDGFR- $\beta$  (H-8) is available conjugated to agarose (sc-373805 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373805 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373805 PE), fluorescein (sc-373805 FITC), Alexa Fluor<sup>®</sup> 488 (sc-373805 AF488), Alexa Fluor<sup>®</sup> 546 (sc-373805 AF546), Alexa Fluor<sup>®</sup> 594 (sc-373805 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-373805 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-373805 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-373805 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373805 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

p-PDGFR- $\beta$  (H-8) is recommended for detection of Tyr 1009 phosphorylated PDGFR- $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

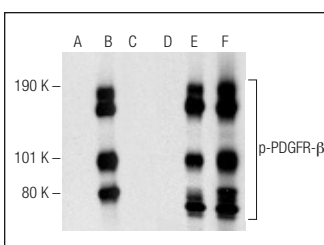
p-PDGFR- $\beta$  (H-8) is also recommended for detection of correspondingly phosphorylated PDGFR- $\beta$  in additional species, including equine, canine, bovine and porcine.

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.

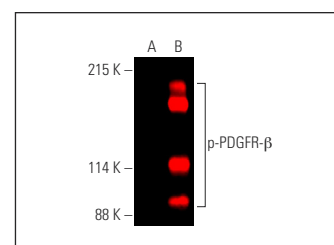
Molecular Weight of p-PDGFR- $\beta$ : 190 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, PDGFR- $\beta$  (h2): 293T Lysate: sc-159386 or CCD-1064Sk + PDGF cell lysate: sc-2264.

## 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- $\beta$  (H-8): sc-373805 (A,B,C) and PDGFR- $\beta$  (11H4): sc-80991 (D,E,F).



p-PDGFR- $\beta$  (H-8): sc-373805 AF790. Direct near-infrared western blot analysis of PDGFR- $\beta$  phosphorylation in non-transfected: sc-117752 (A) and human PDGFR- $\beta$  transfected: sc-159386 (B) 293T whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214.

## SELECT PRODUCT CITATIONS

- Goldsmith, Z.K., et al. 2018. Targeting the platelet-derived growth factor- $\beta$  stimulatory circuitry to control retinoblastoma seeds. *Invest. Ophthalmol. Vis. Sci.* 59: 4486-4495.

## STORAGE

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

## RESEARCH USE

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

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