

p-PDGFR- β (Tyr 857): sc-12907

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, α and β , which are endowed with protein tyrosine kinase domains and undergo either homo- or heterodimerization as a consequence of ligand binding. Ligand stimulation of PDGFR- β 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- β (Tyr 857) is available as either goat (sc-12907) or rabbit (sc-12907-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 857 phosphorylated PDGFR- β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-12907 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PDGFR- β (Tyr 857) is recommended for detection of Tyr 857 phosphorylated PDGFR- β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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- β (Tyr 857) is also recommended for detection of correspondingly phosphorylated PDGFR- β in additional species, including equine, canine, bovine, porcine and avian.

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

Molecular Weight of p-PDGFR- β : 190 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

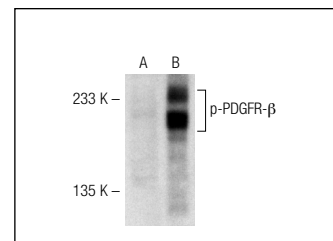
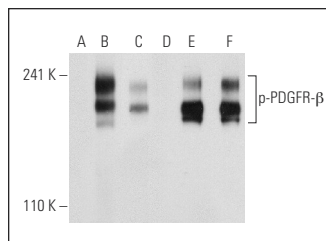
STORAGE

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.

DATA



SELECT PRODUCT CITATIONS

- Wilhelm, S.M., et al. 2004. BAY 43-9006 exhibits broad spectrum oral antitumor activity and targets the RAF/MEK/ERK pathway and receptor tyrosine kinases involved in tumor progression and angiogenesis. *Cancer Res.* 64: 7099-7109.
- Siegbahn, A., et al. 2008. TF/FVIIa transactivate PDGFR- β to regulate PDGF-BB-induced chemotaxis in different cell types: involvement of Src and PLC. *Arterioscler. Thromb. Vasc. Biol.* 28: 135-141.
- Chamberlain, M.D., et al. 2008. Disrupted RabGAP function of the p85 subunit of phosphatidylinositol 3-kinase results in cell transformation. *J. Biol. Chem.* 283: 15861-15868.
- Nielsen, M.B., et al. 2008. Effects of osmotic stress on the activity of MAPKs and PDGFR- β -mediated signal transduction in NIH-3T3 fibroblasts. *Am. J. Physiol., Cell Physiol.* 294: C1046-C1055.
- Rocha, A., et al. 2008. Progesterone sensitizes breast cancer MCF7 cells to imatinib inhibitory effects. *J. Cell. Biochem.* 103: 607-614.
- Benny, O., et al. 2009. Local delivery of poly lactic-co-glycolic acid microspheres containing imatinib mesylate inhibits intracranial xenograft glioma growth. *Clin. Cancer Res.* 15: 1222-1231.
- Chamberlain, M.D., et al. 2010. Deregulation of Rab5 and Rab4 proteins in p85R274A-expressing cells alters PDGFR trafficking. *Cell. Signal.* 22: 1562-1575.
- Nincheri, P., et al. 2010. Sphingosine kinase-1/S1P1 signalling axis negatively regulates mitogenic response elicited by PDGF in mouse myoblasts. *Cell. Signal.* 22: 1688-1699.
- Kumar, A., et al. 2010. Platelet-derived growth factor-DD targeting arrests pathological angiogenesis by modulating glycogen synthase kinase-3 β phosphorylation. *J. Biol. Chem.* 285: 15500-15510.