

p-PDGFR- β (Tyr 716): sc-16569

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 716) is available as either a goat (sc-16569) or rabbit (sc-16569-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 716 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-16569 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PDGFR- β (Tyr 716) is recommended for detection of Tyr 716 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).

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: CCD-1064Sk + PDGF cell lysate: sc-2264 or NIH/3T3 whole cell lysate: sc-2210.

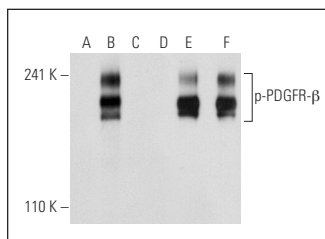
STORAGE

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

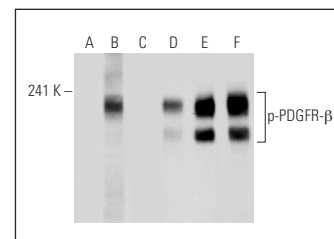
RESEARCH USE

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

DATA



Western blot analysis of PDGFR- β phosphorylation in non-transfected: sc-117752 (A,D), untreated human PDGFR- β transfected: sc-159386 (B,E) and lambda protein phosphatase (sc-200312A) treated human PDGFR- β transfected: sc-159386 (C,F) 293T whole cell lysates. Antibodies tested include p-PDGFR- β (Tyr 716)-R: sc-16569-R (A,B,C) and PDGFR- β (11H4): sc-80991 (D,E,F).



Western blot analysis of PDGFR- β phosphorylation in untreated (A,D), PDGF treated (B,E) and PDGF and lambda protein phosphatase treated (C,F) NIH/3T3 whole cell lysates. Antibodies tested include p-PDGFR- β (Tyr 716)-R: sc-16569-R (A,B,C) and PDGFR- β (11H4): sc-80991 (D,E,F).

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.
- 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.
- Zemskov, E.A., et al. 2009. Regulation of platelet-derived growth factor receptor function by integrin-associated cell surface transglutaminase. *J. Biol. Chem.* 284: 16693-16703.
- 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.
- Zemskov, E.A., et al. 2012. Tissue transglutaminase promotes PDGF/PDGFR-mediated signaling and responses in vascular smooth muscle cells. *J. Cell. Physiol.* 227: 2089-2096.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **p-PDGFR- β (F-10): sc-365464** or **p-PDGFR- β (H-3): sc-365465**, our highly recommended monoclonal alternatives to p-PDGFR- β (Tyr 716).