

p-PDGFR- β (F-10): sc-365464

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 auto-phosphorylation 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.

CHROMOSOMAL LOCATION

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

SOURCE

p-PDGFR- β (F-10) is a mouse monoclonal antibody specific for an epitope corresponding to a short amino acid sequence containing Tyr 716 phosphorylated PDGFR- β of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365464 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

p-PDGFR- β (F-10) is recommended for detection of Tyr 716 phosphorylated PDGFR- β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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: NIH/3T3 whole cell lysate: sc-2210 or CCD-1064Sk + PDGF cell lysate: sc-2264.

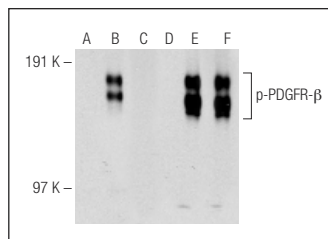
STORAGE

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

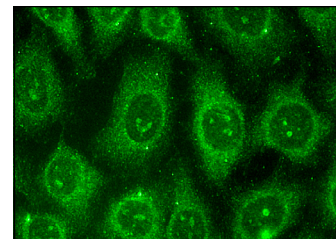
RESEARCH USE

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 (F-10): sc-365464 (**A, B, C**) and PDGFR- β (11H4): sc-80991 (**D, E, F**).



p-PDGFR- β (F-10): sc-365464. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Tsutsumi, R., et al. 2017. Assay to visualize specific protein oxidation reveals spatio-temporal regulation of SHP2. *Nat. Commun.* 8: 466.
2. Tsutsumi, R., et al. 2018. Off-target inhibition by active site-targeting SHP2 inhibitors. *FEBS Open Bio* 8: 1405-1411.
3. Bourn, J., et al. 2019. Detection of tyrosine kinase inhibitors-induced COX-2 expression in bladder cancer by fluorocoxib A. *Oncotarget* 10: 5168-5180.
4. Bielora, B., et al. 2019. Sustained response to imatinib in a pediatric patient with concurrent myeloproliferative disease and lymphoblastic lymphoma associated with a CCDC88C-PDGFRB fusion gene. *Acta Haematol.* 141: 119-127.
5. Saini, H., et al. 2020. The role of tumor-stroma interactions on desmoplasia and tumorigenicity within a microengineered 3D platform. *Biomaterials* 247: 119975.
6. Kim, M.S., et al. 2020. Potential role of PDGFR β -associated THBS4 in colorectal cancer development. *Cancers* 12: 2533.
7. Zhang, B., et al. 2021. Trefoil factor 2 secreted from damaged hepatocytes activates hepatic stellate cells to induce fibrogenesis. *J. Biol. Chem.* 297: 100887.
8. Li, J., et al. 2023. Type H vessel/platelet-derived growth factor receptor β^+ perivascular cell disintegration is involved in vascular injury and bone loss in radiation-induced bone damage. *Cell Prolif.* 56: e13406.

PROTOCOLS

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