

p-PDGFR- α (Tyr 720): sc-12910

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 hetero-dimerization as a consequence of ligand binding. Following binding of PDGF, the PDGFR- α becomes phosphorylated in its kinase insert domain at Tyr 720. Phosphorylation of PDGFR- α at Tyr 720 is required for the association of SHP-2 and GRB2. In the PDGFR- α / β heterodimer, the α -receptor is phosphorylated at Tyr 754. Phosphorylation of Tyr 754 permits the binding of specific signal transduction molecules, thereby initiating signal-transduction pathways from the PDGFR- α / β heterodimer.

CHROMOSOMAL LOCATION

Genetic locus: PDGFRA (human) mapping to 4q12; Pdgfra (mouse) mapping to 5 C3.3.

SOURCE

p-PDGFR- α (Tyr 720) is available as either goat (sc-12910) or rabbit (sc-12910-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 720 phosphorylated PDGFR- α of human origin.

PRODUCT

Each vial contains 100 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-12910 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PDGFR- α (Tyr 720) is recommended for detection of Tyr 720 phosphorylated PDGFR- α 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- α (Tyr 720) is also recommended for detection of correspondingly phosphorylated PDGFR- α in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PDGFR- α siRNA (h): sc-29443, PDGFR- α siRNA (m): sc-29444, PDGFR- α shRNA Plasmid (h): sc-29443-SH, PDGFR- α shRNA Plasmid (m): sc-29444-SH, PDGFR- α shRNA (h) Lentiviral Particles: sc-29443-V and PDGFR- α shRNA (m) Lentiviral Particles: sc-29444-V.

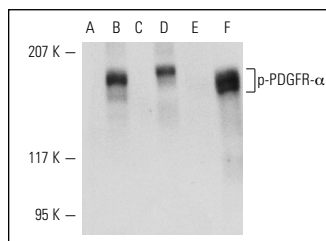
Molecular Weight of p-PDGFR- α : 185 kDa.

Positive Controls: A-431 + EGF whole cell lysate: sc-2202, CCD-1064Sk + PDGF cell lysate: sc-2264 or NIH/3T3 + PDGF cell lysate: sc-3803.

STORAGE

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

DATA



p-PDGFR- α (Tyr 720)-R: sc-12910-R. Western blot analysis of PDGFR- α phosphorylation in untreated (A,C) and PDGF-treated (B,D) CCD-1064Sk (A,B) and NIH/3T3 (C,D) and untreated (E) and EGF-treated (F) A-431 whole cell lysates.

SELECT PRODUCT CITATIONS

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- Ramos, A.H., et al. 2009. Amplification of chromosomal segment 4q12 in non-small cell lung cancer. *Cancer Biol. Ther.* 8: 2042-2050.
- Yamazaki, T., et al. 2009. Activation of MAP kinases, Akt and PDGF receptors in injured peripheral nerves. *J. Peripher. Nerv. Syst.* 14: 165-176.
- Awan, A., et al. 2010. Immunofluorescence and mRNA analysis of human embryonic stem cells (hESCs) grown under feeder-free conditions. *Methods Mol. Biol.* 584: 195-210.
- Ball, S.G., et al. 2010. Neuropilin-1 regulates platelet-derived growth factor receptor signalling in mesenchymal stem cells. *Biochem. J.* 427: 29-40.

RESEARCH USE

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