

PDGFR- β (P-20): sc-339

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, PDGFR- α and - β , which are endowed with protein tyrosine kinase domains. PDGFR- α can bind to both A and B subunits of PDGF, while PDGFR- β can only bind the B subunit. Ligand binding promotes either homo- or heterodimerization of the PDGF receptors in a specific manner. PDGF-AA induces the dimerization of two α receptors, PDGF-AB induces dimerization of $\alpha\alpha$ and $\alpha\beta$, and PDGF-BB induces the formation of three types of dimers, $\alpha\alpha$, $\alpha\beta$ and $\beta\beta$. The genes encoding PDGFR- α and - β map to human chromosome 4q12 and 5q32, respectively. Translocation of the PDGFR- β gene with the *Tel* gene is linked with chronic myelomonocytic leukemia (CMML), a myelodysplastic syndrome, and demonstrates the oncogenic potential of the PDGF receptors.

CHROMOSOMAL LOCATION

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

SOURCE

PDGFR- β (P-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of 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.

PDGFR- β (P-20) is available conjugated to agarose (sc-339 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-339 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA.

Blocking peptide available for competition studies, sc-339 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PDGFR- β (P-20) is recommended for detection of PDGF receptor type β of human and, to a lesser extent, mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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.

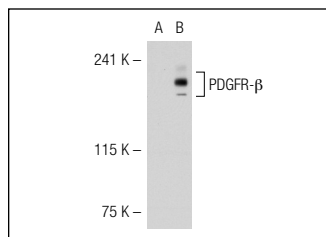
Molecular Weight of PDGFR- β : 180-190 kDa.

Positive Controls: PDGFR- β (h): 293T Lysate: sc-114235 or CCD-1064Sk cell lysate: sc-2263.

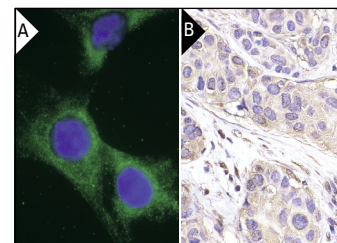
STORAGE

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

DATA



PDGFR- β (P-20): sc-339. Western blot analysis of PDGFR- β expression in non-transfected: sc-117752 (A) and human PDGFR- β transfected: sc-114235 (B) 293T whole cell lysates.



PDGFR- β (P-20): sc-339. Immunofluorescence staining of methanol-fixed NIH/3T3 cells. Note membrane and cytoplasmic fluorescein immunostaining and nuclear DAPI counterstain (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing membrane and cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Koskinen, P.K., et al. 1997. Cytomegalovirus infection enhances experimental obliterative bronchiolitis in rat tracheal allografts. *Am. J. Respir. Crit. Care Med.* 155: 2078-2088.
- Lemstrom, K.B., et al. 1997. Expression and localization of platelet-derived growth factor ligand and receptor protein during acute and chronic rejection of rat cardiac allografts. *Circulation* 96: 1240-1249.
- Ball, S.G., et al. 2010. Neuropilin-1 regulates platelet-derived growth factor receptor signalling in mesenchymal stem cells. *Biochem. J.* 427: 29-40.
- Ziino, A.J., et al. 2010. Effects of rho-kinase inhibition on pulmonary hypertension, lung growth, and structure in neonatal rats chronically exposed to hypoxia. *Pediatr. Res.* 67: 177-182.
- Pahara, J., et al. 2010. Dimerization drives PDGF receptor endocytosis through a C-terminal hydrophobic motif shared by EGF receptor. *Exp. Cell Res.* 316: 2237-2250.
- Zietsch, J., et al. 2010. The 4q12 amplicon in malignant peripheral nerve sheath tumors: consequences on gene expression and implications for sunitinib treatment. *PLoS ONE* 5: e11858.
- Shao, M., et al. 2011. PDGF induced microRNA alterations in cancer cells. *Nucleic Acids Res.* 39: 4035-4047.

RESEARCH USE

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



Try **PDGFR- β (D-6): sc-374573** or **PDGFR- β (11H4): sc-80991**, our highly recommended monoclonal alternatives to PDGFR- β (P-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PDGFR- β (D-6): sc-374573**.