

# PDGFR- $\beta$ (D-6): sc-374573

## 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- $\alpha$  and - $\beta$ , which are endowed with protein tyrosine kinase domains. PDGFR- $\alpha$  can bind to both A and B subunits of PDGF, while PDGFR- $\beta$  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  $\alpha$  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  $\beta\beta$ . Translocation of the PDGFR- $\beta$  gene with the Tel gene is linked to 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- $\beta$  (D-6) is a mouse monoclonal antibody raised against amino acids 958-1106 of PDGFR- $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDGFR- $\beta$  (D-6) is available conjugated to agarose (sc-374573 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374573 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374573 PE), fluorescein (sc-374573 FITC), Alexa Fluor<sup>®</sup> 488 (sc-374573 AF488), Alexa Fluor<sup>®</sup> 546 (sc-374573 AF546), Alexa Fluor<sup>®</sup> 594 (sc-374573 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-374573 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-374573 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-374573 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

PDGFR- $\beta$  (D-6) is recommended for detection of PDGF receptor type  $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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- $\beta$  siRNA (h): sc-29442, PDGFR- $\beta$  siRNA (m): sc-36200, PDGFR- $\beta$  shRNA Plasmid (h): sc-29442-SH, PDGFR- $\beta$  shRNA Plasmid (m): sc-36200-SH, PDGFR- $\beta$  shRNA (h) Lentiviral Particles: sc-29442-V and PDGFR- $\beta$  shRNA (m) Lentiviral Particles: sc-36200-V.

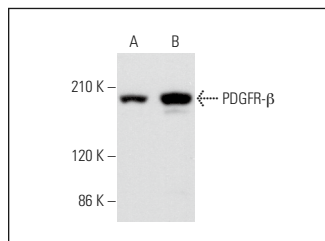
Molecular Weight of PDGFR- $\beta$ : 180-190 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, Sol8 cell lysate: sc-2249 or C2C12 whole cell lysate: sc-364188.

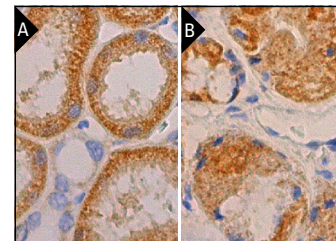
## STORAGE

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

## DATA



PDGFR- $\beta$  (D-6): sc-374573. Western blot analysis of PDGFR- $\beta$  expression in Sol8 (A) and C2C12 (B) whole cell lysates.



PDGFR- $\beta$  (D-6): sc-374573. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Zeng, J., et al. 2018. Lipopolysaccharide induces subacute cerebral micro-hemorrhages with involvement of nitric oxide synthase in rats. *J. Stroke Cerebrovasc. Dis.* 27: 1905-1913.
- Nakamura, S., et al. 2019. Nrf2 activator RS9 suppresses pathological ocular angiogenesis and hyperpermeability. *Invest. Ophthalmol. Vis. Sci.* 60: 1943-1952.
- Fozzatti, L., et al. 2019. Interplay of fibroblasts with anaplastic tumor cells promotes follicular thyroid cancer progression. *Sci. Rep.* 9: 8028.
- Yang, C.C., et al. 2019. Lipopolysaccharide-induced matrix metalloproteinase-9 expression associated with cell migration in rat brain astrocytes. *Int. J. Mol. Sci.* 21: 259.
- Chen, Q., et al. 2020. The interaction of EphA4 with PDGFR- $\beta$  regulates proliferation and neuronal differentiation of neural progenitor cells *in vitro* and promotes neurogenesis *in vivo*. *Front. Aging Neurosci.* 12: 7.
- Moyano-Galceran, L., et al. 2020. Adaptive RSK-EphA2-GPRC5A signaling switch triggers chemotherapy resistance in ovarian cancer. *EMBO Mol. Med.* 12: e11177.
- Eyre, J.J., et al. 2020. A human retinal microvascular endothelial-pericyte co-culture model to study diabetic retinopathy *in vitro*. *Exp. Eye Res.* 201: 108293.
- Yang, C.C., et al. 2020. Galangin inhibits LPS-induced MMP-9 expression via suppressing protein kinase-dependent AP-1 and FoxO1 activation in rat brain astrocytes. *J. Inflamm. Res.* 13: 945-960.

## RESEARCH USE

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

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