SANTA CRUZ BIOTECHNOLOGY, INC.

PDGFR-β (18A2): sc-19995



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 $\beta\beta$. Translocation of the PDGFR- β 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.

SOURCE

PDGFR- β (18A2) is a mouse monoclonal antibody raised against PDGFR- β of human origin.

PRODUCT

Each vial contains 200 μg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDGFR-β (18A2) is available conjugated to agarose (sc-19995 AC), 500 μg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-19995 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19995 PE), fluorescein (sc-19995 FITC), Alexa Fluor[®] 488 (sc-19995 AF488), Alexa Fluor[®] 546 (sc-19995 AF546), Alexa Fluor[®] 594 (sc-19995 AF594) or Alexa Fluor[®] 647 (sc-19995 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-19995 AF680) or Alexa Fluor[®] 790 (sc-19995 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PDGFR- β (18A2) is recommended for detection of PDGF receptor type β of human origin by 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 flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for PDGFR- β siRNA (h): sc-29442, PDGFR- β shRNA Plasmid (h): sc-29442-SH and PDGFR- β shRNA (h) Lentiviral Particles: sc-29442-V.

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

STORAGE

Store at 4° C, **D0 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







PDGFR-β (18A2): sc-19995. 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 upper stomach tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

- Mathew, P., et al. 2004. Platelet-derived growth factor receptor inhibitor imatinib mesylate and docetaxel: a modular phase I trial in androgenindependent prostate cancer. J. Clin. Oncol. 22: 3323-3329.
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- Sava, P., et al. 2017. Human pericytes adopt myofibroblast properties in the microenvironment of the IPF lung. JCI Insight 2: e96352.
- 7. Imai, T., et al. 2019. Intracellular Fe²⁺ accumulation in endothelial cells and pericytes induces blood-brain barrier dysfunction in secondary brain injury after brain hemorrhage. Sci. Rep. 9: 6228.
- Hoier, B., et al. 2020. Early time course of change in angiogenic proteins in human skeletal muscle and vascular cells with endurance training. Scand. J. Med. Sci. Sports 30: 1117-1131.
- Kremer, H., et al. 2020. Pro-angiogenic activity discriminates human adipose-derived stromal cells from retinal pericytes: considerations for cell-based therapy of diabetic retinopathy. Front. Cell Dev. Biol. 8: 387.

PROTOCOLS

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