

PDGFR- α (C-20): sc-338

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 5q31-32, 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: PDGFRA (human) mapping to 4q12; Pdgfra (mouse) mapping to 5 C3.3.

SOURCE

PDGFR- α (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of 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-338 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as PE conjugate for flow cytometry, sc-338 PE, 100 tests; as agarose conjugate for immunoprecipitation, sc-338 AC, 500 μ g/0.25 ml agarose in 1 ml; and as HRP conjugate for Western Blotting, sc-338 HRP, 200 μ g/1 ml.

APPLICATIONS

PDGFR- α (C-20) is recommended for detection of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PDGFR- α (C-20) is also recommended for detection of PDGFR- α in additional species, including equine, canine, bovine, porcine and avian.

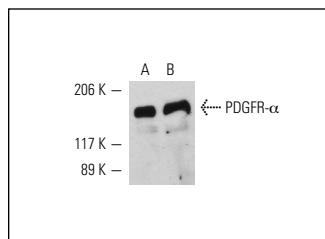
Suitable for use as control antibody for PDGFR- α siRNA (h): sc-29443, PDGFR- α siRNA (m): sc-29444, PDGFR- α shRNA Plasmid (h): sc-29443-SH, PDGFR- α shRNA Plasmid (m): sc-29444-SH, PDGFR- α shRNA (h) Lentiviral Particles: sc-29443-V and PDGFR- α shRNA (m) Lentiviral Particles: sc-29444-V.

Molecular Weight of PDGFR- α : 170 kDa.

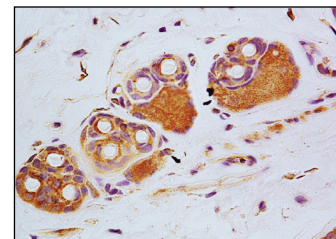
STORAGE

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

DATA



PDGFR- α (C-20): sc-338. Western blot analysis of PDGFR- α expression in NIH/3T3 whole cell lysates (A,B).



PDGFR- α (C-20): sc-338. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal mouse skin showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

- Lih, C.J., et al. 1996. The platelet-derived growth factor- α receptor is encoded by a growth-arrest-specific (Gas) gene. *Proc. Natl. Acad. Sci. USA* 93: 4617-4622.
- Janowski, M., et al. 2011. Migratory capabilities of human umbilical cord blood-derived neural stem cells (HUCB-NSC) *in vitro*. *Acta Neurobiol. Exp.* 71: 24-35.
- Jinno, S. 2011. Regional and laminar differences in antigen profiles and spatial distributions of astrocytes in the mouse hippocampus, with reference to aging. *Neuroscience* 180: 41-52.
- Furlan, A., et al. 2011. Abl interconnects oncogenic Met and p53 core pathways in cancer cells. *Cell Death Differ.* 10: 1608-1616.
- Yang, J., et al. 2012. Long-term exposure of gastrointestinal stromal tumor cells to sunitinib induces epigenetic silencing of the PTEN gene. *Int. J. Cancer* 130: 959-966.
- Ortega, M.C., et al. 2012. Neuregulin-1/ErbB4 signaling controls the migration of oligodendrocyte precursor cells during development. *Exp. Neurol.* 235: 610-620.
- Hansmann, F., et al. 2012. Highly malignant behavior of a murine oligodendrocyte precursor cell line following transplantation into the demyelinated and nondemyelinated central nervous system. *Cell Transplant.* 21: 1161-1175.

RESEARCH USE

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

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Try **PDGFR- α (C-9): sc-398206** or **PDGFR- α (16A1): sc-21789**, our highly recommended monoclonal alternatives to PDGFR- α (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PDGFR- α (C-9): sc-398206**.