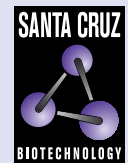


PDGF-A (E-10): sc-9974



The Power to Question

BACKGROUND

PDGF is a mitogen for mesenchyme- and glia-derived cells. It consists of two disulfide-bonded polypeptide chains, A and B, and occurs as three isoforms, PDGF AA, PDGF AB and PDGF BB. The three isoforms bind with different affinities to two receptor types, A and B, which are structurally related and endowed with protein-tyrosine kinase domains. Ligand binding induces activation of the receptor kinases by formation of receptor dimers; the A subunit of PDGF binds only to A receptors with high affinity, whereas the B subunit can bind to both A and B receptors. Evidence suggests that PDGF may function as a neurotrophic factor. The fact that PDGF-A receptors are expressed in oligodendrocyte progenitor cells, whereas PDGF-B receptors are expressed on neurons, suggests that the different isoforms of PDGF may regulate growth and differentiation of different cell types in the developing central nervous system by paracrine and autocrine routes.

CHROMOSOMAL LOCATION

Genetic locus: PDGFA (human) mapping to 7p22.3; Pdgfa (mouse) mapping to 5 G2.

SOURCE

PDGF-A (E-10) is a mouse monoclonal antibody raised against amino acids 135-211 mapping at the C-terminus of PDGF-A of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDGF-A (E-10) is available conjugated to agarose (sc-9974 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-9974 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9974 PE), fluorescein (sc-9974 FITC), Alexa Fluor® 488 (sc-9974 AF488), Alexa Fluor® 546 (sc-9974 AF546), Alexa Fluor® 594 (sc-9974 AF594) or Alexa Fluor® 647 (sc-9974 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-9974 AF680) or Alexa Fluor® 790 (sc-9974 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, PDGF-A (E-10) is available conjugated to biotin (sc-9974 B), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

PDGF-A (E-10) is recommended for detection of precursor and mature PDGF-A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PDGF-A siRNA (h): sc-39703, PDGF-A siRNA (m): sc-39704, PDGF-A shRNA Plasmid (h): sc-39703-SH, PDGF-A shRNA Plasmid (m): sc-39704-SH, PDGF-A shRNA (h) Lentiviral Particles: sc-39703-V and PDGF-A shRNA (m) Lentiviral Particles: sc-39704-V.

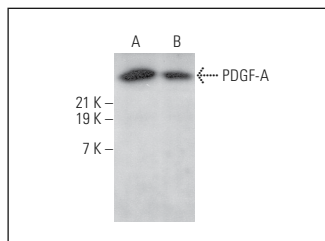
Molecular Weight of PDGF-A monomeric A chain: 17 kDa.

Molecular Weight of PDGF-A dimer: 31 kDa.

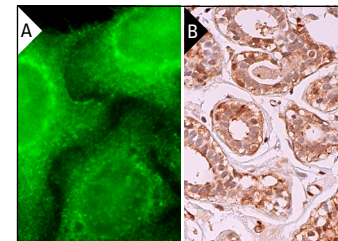
STORAGE

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

DATA



PDGF-A (E-10): sc-9974. Western blot analysis of PDGF-A expression in HeLa (A) and NTERA-2 cl.D1 (B) whole cell lysates.



PDGF-A (E-10): sc-9974. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells and myoepithelial cells (B).

SELECT PRODUCT CITATIONS

- Gupta, S., et al. 2001. Role of phosphoinositide 3-kinase in the aggressive tumor growth of HT1080 human fibrosarcoma cells. *Mol. Cell. Biol.* 21: 5846-5856.
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- Sharma, V.K., et al. 2016. Increased expression of platelet-derived growth factor associated protein-1 is associated with PDGF-B mediated glioma progression. *Int. J. Biochem. Cell Biol.* 78: 194-205.
- Govaere, O., et al. 2017. The PDGFR α -laminin B1-keratin 19 cascade drives tumor progression at the invasive front of human hepatocellular carcinoma. *Oncogene* 36: 6605-6616.
- Sumiyoshi, K., et al. 2018. Spontaneous development of intratumoral heterogeneity in a transposon-induced mouse model of glioma. *Cancer Sci.* 109: 1513-1523.
- Naipauer, J., et al. 2019. PDGFRA defines the mesenchymal stem cell Kaposi's sarcoma progenitors by enabling KSHV oncogenesis in an angiogenic environment. *PLoS Pathog.* 15: e1008221.
- Wu, C.S., et al. 2020. ASC modulates HIF-1 α stability and induces cell mobility in OSCC. *Cell Death Dis.* 11: 721.
- Méndez-Solís, O., et al. 2021. Kaposi's sarcoma herpesvirus activates the hypoxia response to usurp HIF2 α -dependent translation initiation for replication and oncogenesis. *Cell Rep.* 37: 110144.

RESEARCH USE

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

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