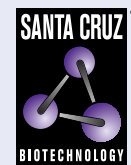


PAC-1 (4O21): sc-32776



The Power to Question

BACKGROUND

Mitogen-activated protein (MAP) kinases are a large class of proteins involved in signal transduction pathways that are activated by a range of stimuli and mediate a number of physiological and pathological changes in the cell. Dual specificity phosphatases (DSPs) are a subclass of the protein tyrosine phosphatase (PTP) gene superfamily, which are selective for dephosphorylating critical phosphothreonine and phosphotyrosine residues within MAP kinases. DSP gene expression is induced by a host of growth factors and/or cellular stresses, thereby negatively regulating MAP kinase superfamily members including MAPK/ERK, SAPK/JNK and p38. The members of the dual-specificity phosphatase protein family include MKP-1/CL100 (3CH134), VHR, PAC-1, MKP-2, hVH-3 (B23), hVH-5, MKP-3, MKP-X, and MKP-4. Human PAC-1 maps to chromosome 2q11.2 and encodes a 314 amino acid, mitogen-induced protein.

CHROMOSOMAL LOCATION

Genetic locus: DUSP2 (human) mapping to 2q11.2.

SOURCE

PAC-1 (4O21) is a mouse monoclonal antibody raised against recombinant PAC-1 of human origin.

PRODUCT

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

PAC-1 (4O21) is available conjugated to agarose (sc-32776 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32776 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32776 PE), fluorescein (sc-32776 FITC), Alexa Fluor® 488 (sc-32776 AF488), Alexa Fluor® 546 (sc-32776 AF546), Alexa Fluor® 594 (sc-32776 AF594) or Alexa Fluor® 647 (sc-32776 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32776 AF680) or Alexa Fluor® 790 (sc-32776 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PAC-1 (4O21) is recommended for detection of PAC-1 of 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 PAC-1 siRNA (h): sc-39004, PAC-1 shRNA Plasmid (h): sc-39004-SH and PAC-1 shRNA (h) Lentiviral Particles: sc-39004-V.

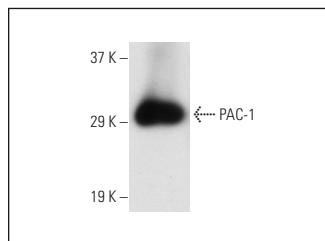
Molecular Weight of PAC-1: 32 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or HeLa whole cell lysate: sc-2200.

STORAGE

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

DATA



PAC-1 (4O21): sc-32776. Western blot analysis of PAC-1 expression in Ramos whole cell lysate.

SELECT PRODUCT CITATIONS

- Wu, J., et al. 2007. PAC1 is a direct transcription target of E2F-1 in apoptotic signaling. *Oncogene* 26: 6526-6535.
- Lin, S.C., et al. 2012. Hypoxia-induced microRNA-20a expression increases ERK phosphorylation and angiogenic gene expression in endometriotic stromal cells. *J. Clin. Endocrinol. Metab.* 97: E1515-E1523.
- Eneman, B., et al. 2016. Distribution and function of PACAP and its receptors in the healthy and nephrotic kidney. *Nephron* 132: 301-311.
- Han, A.L., et al. 2017. Fibulin-3 promotes muscle-invasive bladder cancer. *Oncogene* 36: 5243-5251.
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- Wang, C.A., et al. 2021. Suppression of extracellular vesicle VEGF-C-mediated lymphangiogenesis and pancreatic cancer early dissemination by a selective HDAC1/2 inhibitor. *Mol. Cancer Ther.* 20: 1550-1560.
- Kawamura, E., et al. 2022. Suppression of intrahepatic cholangiocarcinoma cell growth by SKI via upregulation of the CDK inhibitor p21. *FEBS Open Bio* 12: 2122-2135.
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RESEARCH USE

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