

PI 3-kinase C2 α (G-5): sc-365290

BACKGROUND

Phosphatidylinositol 3-kinases (PI3Ks) phosphorylate the 3' OH position of the inositol ring of inositol lipids. Human PI 3-kinase C2 α (PIK3C2A, C2-containing phosphatidylinositol kinase, p110 α or CPK) contains a C-terminal calcium-binding and phospholipid-binding module known as the C2 domain. The cDNA sequence of PI 3-kinase C2 α predicts a 1,686-amino acid protein that is 90% identical to mouse Cpk (term for the *Drosophila* homolog). Northern blot analysis reveals that PI 3-kinase C2 α is expressed as an 8 kb mRNA in a wide variety of tissues. *In vitro*, the PI 3-kinase C2 α enzyme can phosphorylate phosphatidylinositol and phosphatidylinositol-4-phosphate. The PI 3-kinase C2 α gene contains 32 exons and spans approximately 76 kb.

CHROMOSOMAL LOCATION

Genetic locus: PIK3C2A (human) mapping to 11p15.1; Pik3c2a (mouse) mapping to 7 F1.

SOURCE

PI 3-kinase C2 α (G-5) is a mouse monoclonal antibody raised against amino acids 61-360 mapping near the N-terminus of PI 3-kinase C2 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase C2 α (G-5) is available conjugated to agarose (sc-365290 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365290 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365290 PE), fluorescein (sc-365290 FITC), Alexa Fluor[®] 488 (sc-365290 AF488), Alexa Fluor[®] 546 (sc-365290 AF546), Alexa Fluor[®] 594 (sc-365290 AF594) or Alexa Fluor[®] 647 (sc-365290 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365290 AF680) or Alexa Fluor[®] 790 (sc-365290 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PI 3-kinase C2 α (G-5) is recommended for detection of PI 3-kinase C2 α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PI 3-kinase C2 α siRNA (h): sc-61340, PI 3-kinase C2 α siRNA (m): sc-61341, PI 3-kinase C2 α shRNA Plasmid (h): sc-61340-SH, PI 3-kinase C2 α shRNA Plasmid (m): sc-61341-SH, PI 3-kinase C2 α shRNA (h) Lentiviral Particles: sc-61340-V and PI 3-kinase C2 α shRNA (m) Lentiviral Particles: sc-61341-V.

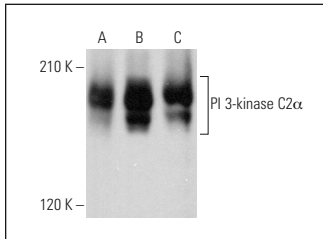
Molecular Weight of PI 3-kinase C2 α : 190 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, HeLa whole cell lysate: sc-2200 or PC-3 cell lysate: sc-2220.

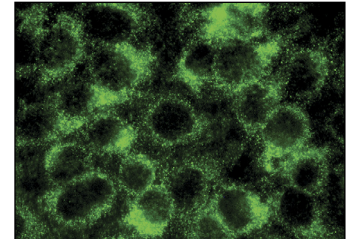
STORAGE

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

DATA



PI 3-kinase C2 α (G-5): sc-365290. Western blot analysis of PI 3-kinase C2 α expression in HeLa (A), PC-3 (B) and HEK293 (C) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



PI 3-kinase C2 α (G-5): sc-365290. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yoon, S., et al. 2014. Inhibition of cell proliferation and migration by miR-509-3p that targets Cdk2, Rac1, and PIK3C2A. *Mol. Cells* 37: 314-321.
2. Zhong, W.F., et al. 2016. Eupatilin induces human renal cancer cell apoptosis via ROS-mediated MAPK and PI3K/Akt signaling pathways. *Oncol. Lett.* 12: 2894-2899.
3. Jiang, Y., et al. 2017. Knockdown of JARID2 inhibits the viability and migration of placenta trophoblast cells in preeclampsia. *Mol. Med. Rep.* 16: 3594-3599.
4. Wang, J., et al. 2018. Isorhamnetin prevents H₂O₂-induced oxidative stress in human retinal pigment epithelial cells. *Mol. Med. Rep.* 17: 648-652.
5. Zhou, H., et al. 2018. Paeoniflorin inhibits PDGF-BB-induced human airway smooth muscle cell growth and migration. *Mol. Med. Rep.* 17: 2660-2664.
6. Jian, M., et al. 2019. Interleukin 7 receptor activates PI3K/Akt/mTOR signaling pathway via downregulation of beclin-1 in lung cancer. *Mol. Carcinog.* 58: 358-365.
7. Sun, J., et al. 2019. Inhibitor of growth 4 inhibits cell proliferation, migration, and induces apoptosis of renal cell carcinoma cells. *J. Cell. Biochem.* 120: 6709-6717.
8. Zhao, H., et al. 2019. DOK7V1 influences the malignant phenotype of lung cancer cells through PI3K/Akt/mTOR and FAK/paxillin signaling pathways. *Int. J. Oncol.* 54: 381-389.
9. Li, J., et al. 2019. Multi-targeting chemoprevention of Chinese herb formula Yanghe Huayan decoction on experimentally induced mammary tumorigenesis. *BMC Complement. Altern. Med.* 19: 48.
10. Cui, C.L., et al. 2020. lncRNA XIST promotes the progression of laryngeal squamous cell carcinoma by sponging miR-144 to regulate IRS1 expression. *Oncol. Rep.* 43: 525-535.

RESEARCH USE

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