

# PI 3-kinase C2 $\beta$ (A-3): sc-377064

## BACKGROUND

Phosphoinositide 3-kinases (PI 3-Ks) phosphorylate the 3'-OH position of the inositol ring of inositol lipids. They act as participants in signaling pathways that regulate cell growth by virtue of their activation in response to various mitogenic stimuli. PI 3-Ks are composed of a catalytic subunit, such as PI 3-kinase C2 $\beta$  (PIK3CB) and an adaptor subunit. PI 3-kinase C2 $\beta$ , also known as p110- $\beta$ , is a 1,070 amino acid protein that shares 42% identity with p110 of bovine origin. It is expressed in several human and rodent cell lines. Studies predict that PI 3-kinase C2 $\beta$  has a role in modulating the formation and stability of  $\alpha$ 2B (ITGA2B)/ $\beta$ 3 (ITGB3) Integrin adhesion bonds, which are essential in shear force-induced platelet activation.

## REFERENCES

- Hu, P., et al. 1993. Cloning of a novel, ubiquitously expressed human phosphatidylinositol 3-kinase and identification of its binding site on p85. *Mol. Cell. Biol.* 13: 7677-7688.
- Roche, S., et al. 1998. A function for phosphatidylinositol 3-kinase  $\beta$  (p85 $\alpha$ -p110 $\beta$ ) in fibroblasts during mitogenesis: requirement for Insulin- and lysophosphatidic acid-mediated signal transduction. *Mol. Cell. Biol.* 18: 7119-7129.
- Kossila, M., et al. 2000. Gene encoding the catalytic subunit p110 $\beta$  of human phosphatidylinositol 3-kinase: cloning, genomic structure, and screening for variants in patients with type 2 diabetes. *Diabetes* 49: 1740-1743.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602925. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: PIK3C2B (human) mapping to 1q32.1; Pik3c2b (mouse) mapping to 1 E4.

## SOURCE

PI 3-kinase C2 $\beta$  (A-3) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PI 3-kinase C2 $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ 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 $\beta$  (A-3) is available conjugated to agarose (sc-377064 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377064 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377064 PE), fluorescein (sc-377064 FITC), Alexa Fluor® 488 (sc-377064 AF488), Alexa Fluor® 546 (sc-377064 AF546), Alexa Fluor® 594 (sc-377064 AF594) or Alexa Fluor® 647 (sc-377064 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377064 AF680) or Alexa Fluor® 790 (sc-377064 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

PI 3-kinase C2 $\beta$  (A-3) is recommended for detection of PI 3-kinase C2 $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 $\beta$  siRNA (h): sc-61346, PI 3-kinase C2 $\beta$  siRNA (m): sc-155932, PI 3-kinase C2 $\beta$  shRNA Plasmid (h): sc-61346-SH, PI 3-kinase C2 $\beta$  shRNA Plasmid (m): sc-155932-SH, PI 3-kinase C2 $\beta$  shRNA (h) Lentiviral Particles: sc-61346-V and PI 3-kinase C2 $\beta$  shRNA (m) Lentiviral Particles: sc-155932-V.

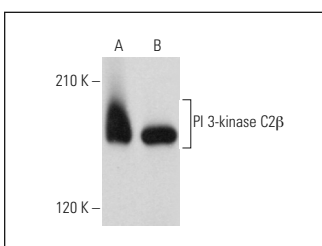
Molecular Weight of PI 3-kinase C2 $\beta$ : 185 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, GA-10 whole cell lysate: sc-364230 or Raji whole cell lysate: sc-364236.

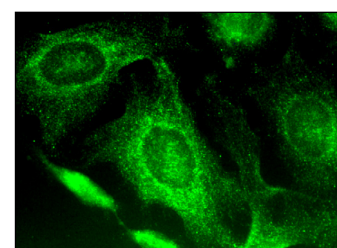
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PI 3-kinase C2 $\beta$  (A-3): sc-377064. Western blot analysis of PI 3-kinase C2 $\beta$  expression in GA-10 (A) and Raji (B) whole cell lysates.



PI 3-kinase C2 $\beta$  (A-3): sc-377064. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Zacharopoulou, N., et al. 2020. The histone demethylase KDM2B activates FAK and PI3K that control tumor cell motility. *Cancer Biol. Ther.* 21: 533-540.

## STORAGE

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

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