

# PI 3-kinase p85 $\alpha$ (C-1): sc-376112

## BACKGROUND

Phosphatidylinositol 3-kinase (PI 3-kinase) is composed of (p85) and (p110) subunits. P85 lacks PI 3-kinase activity and acts as an adapter, coupling p110 to activated protein tyrosine kinase. Two forms of p85 have been described (p85 $\alpha$  and p85 $\beta$ ), each possessing one SH3 and two SH2 domains. Various p110 isoforms have been identified. P110 $\alpha$  and p110 $\beta$  interact with p85 $\alpha$ , and p110 $\alpha$  has also been shown to interact with p85 $\beta$  *in vitro*. P110 $\delta$  expression is restricted to white blood cells. It has been shown to bind p85 $\alpha$  and  $\beta$ , but it apparently does not phosphorylate these subunits. P110 $\delta$  seems to have the capacity to autophosphorylate. P110 $\gamma$  does not interact with the p85 subunits. It has been shown to be activated by  $\alpha$  and  $\beta$  heterotrimeric G proteins.

## REFERENCES

- Skolnik, E.Y., et al. 1991. Cloning of PI 3-kinase-associated p85 utilizing a novel method for expression/cloning of target proteins for receptor tyrosine kinases. *Cell* 65: 83-90.
- Otsu, M., et al. 1991. Characterization of two 85 kDa proteins that associate with receptor tyrosine kinases, middle-T/pp60<sup>c-src</sup> complexes, and PI 3-kinase. *Cell* 65: 91-104.

## CHROMOSOMAL LOCATION

Genetic locus: PIK3R1 (human) mapping to 5q13.1; Pik3r1 (mouse) mapping to 13 D1.

## SOURCE

PI 3-kinase p85 $\alpha$  (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-43 near the N-terminus of PI 3-kinase p85 $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase p85 $\alpha$  (C-1) is available conjugated to agarose (sc-376112 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376112 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376112 PE), fluorescein (sc-376112 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376112 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376112 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376112 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376112 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376112 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376112 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376112 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## APPLICATIONS

PI 3-kinase p85 $\alpha$  (C-1) is recommended for detection of PI 3-kinase p85 $\alpha$  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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

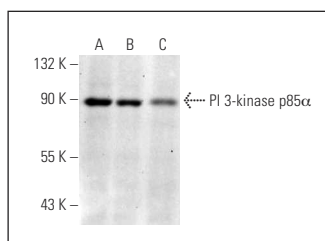
PI 3-kinase p85 $\alpha$  (C-1) is also recommended for detection of PI 3-kinase p85 $\alpha$  in additional species, including equine, bovine and avian.

Suitable for use as control antibody for PI 3-kinase p85 $\alpha$  siRNA (h): sc-36217, PI 3-kinase p85 $\alpha$  siRNA (m): sc-36218, PI 3-kinase p85 $\alpha$  siRNA (r): sc-156021, PI 3-kinase p85 $\alpha$  shRNA Plasmid (h): sc-36217-SH, PI 3-kinase p85 $\alpha$  shRNA Plasmid (m): sc-36218-SH, PI 3-kinase p85 $\alpha$  shRNA Plasmid (r): sc-156021-SH, PI 3-kinase p85 $\alpha$  shRNA (h) Lentiviral Particles: sc-36217-V, PI 3-kinase p85 $\alpha$  shRNA (m) Lentiviral Particles: sc-36218-V and PI 3-kinase p85 $\alpha$  shRNA (r) Lentiviral Particles: sc-156021-V.

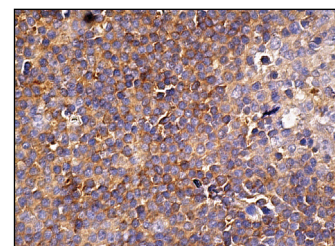
Molecular Weight of PI 3-kinase p85 $\alpha$ : 85 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, NIH/3T3 whole cell lysate: sc-2210 or Caki-1 cell lysate: sc-2224.

## DATA



PI 3-kinase p85 $\alpha$  (C-1) HRP: sc-376112 HRP. Direct western blot analysis of PI 3-kinase p85 $\alpha$  expression in SUP-T1 (A), Caki-1 (B) and NIH/3T3 (C) whole cell lysates.



PI 3-kinase p85 $\alpha$  (C-1): sc-376112. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cells in germinal and non-germinal centers.

## SELECT PRODUCT CITATIONS

- Li, T.M., et al. 2012. Interleukin-11 increases cell motility and up-regulates intercellular adhesion molecule-1 expression in human chondrosarcoma cells. *J. Cell. Biochem.* 113: 3353-3362.
- Chung, Y.C., et al. 2018. Improving Insulin resistance with *Antrodia cinnamomea* mycelium powder to induce a hypoglycemic effect in dexamethasone-induced Insulin-resistant rats. *Mol. Med. Rep.* 17: 3260-3266.
- Smith, K.D., et al. 2020. Hearing damage induced by blast overpressure at mild TBI level in a chinchilla model. *Mil. Med.* 185: 248-255.
- Lin, L., et al. 2021. The inhibition effect of the seaweed polyphenol, 7-phloro-eckol from *Ecklonia cava* on alcohol-induced oxidative stress in Hep G2/CYP2E1 cells. *Mar. Drugs* 19: 158.

## RESEARCH USE

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