

# PI 3-kinase p85 $\alpha$ (U13): sc-56938

## 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  $\beta\gamma$  heterotrimeric G proteins.

## CHROMOSOMAL LOCATION

Genetic locus: PIK3R1 (human) mapping to 5q13.1; Ptk3r1 (mouse) mapping to 13 D1.

## SOURCE

PI 3-kinase p85 $\alpha$  (U13) is a mouse monoclonal antibody raised against recombinant PI 3-kinase p85 $\alpha$  of bovine origin.

## PRODUCT

Each vial contains 1 ml culture supernatant containing IgG<sub>1</sub> with < 0.1% sodium azide.

## APPLICATIONS

PI 3-kinase p85 $\alpha$  (U13) is recommended for detection of the SH3 domain of PI 3-kinase p85 $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunoprecipitation [10-20  $\mu$ l per 100-500  $\mu$ g of total protein (1 ml of cell lysate)]; non cross-reactive with the p85 $\beta$  isoform.

PI 3-kinase p85 $\alpha$  (U13) is also recommended for detection of the SH3 domain of PI 3-kinase p85 $\alpha$  in additional species, including bovine.

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: PI 3-kinase p85 $\alpha$  (m): 293T Lysate: sc-122557, SW480 cell lysate: sc-2219 or Caki-1 cell lysate: sc-2224.

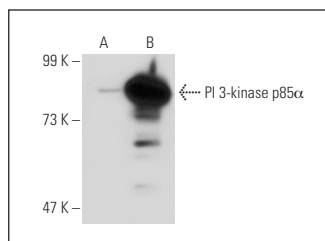
## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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

## DATA



PI 3-kinase p85 $\alpha$  (U13): sc-56938. Western blot analysis of PI 3-kinase p85 $\alpha$  expression in non-transfected: sc-117752 (A) and mouse PI 3-kinase p85 $\alpha$  transfected: sc-122557 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Kung, M.L., et al. 2012. Hepatoma-derived growth factor stimulates podosome rosettes formation in NIH/3T3 cells through the activation of phosphatidylinositol 3-kinase/Akt pathway. *Biochem. Biophys. Res. Commun.* 425: 169-176.
- Yoshimaru, T., et al. 2013. Targeting BIG3-PHB2 interaction to overcome tamoxifen resistance in breast cancer cells. *Nat. Commun.* 4: 2443.
- He, S., et al. 2018. MicroRNA-511 inhibits cellular proliferation and invasion in colorectal cancer by directly targeting hepatoma-derived growth factor. *Oncol. Res.* E-published.
- Camaforte, N.A.P., et al. 2019. Hypoglycaemic activity of *Bauhinia holophylla* through GSK3- $\beta$  inhibition and glycogenesis activation. *Pharm. Biol.* 57: 269-279.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **PI 3-kinase p85 $\alpha$ / $\beta$ / $\gamma$  (D-9): sc-374534** for PI 3-kinase p85 $\alpha$ / $\beta$ / $\gamma$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.