

# PI 3-kinase p85 $\alpha$ (N-18): sc-31969

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

PI 3-kinase p85 $\alpha$  (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PI 3-kinase p85 $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31969 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PI 3-kinase p85 $\alpha$  (N-18) is recommended for detection of PI 3-kinase p85 $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PI 3-kinase p85 $\alpha$  (N-18) is also recommended for detection of PI 3-kinase p85 $\alpha$  in additional species, including equine, canine, bovine, porcine 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 $\alpha$  shRNA Plasmid (h): sc-36217-SH, PI 3-kinase p85 $\alpha$  shRNA Plasmid (m): sc-36218-SH, PI 3-kinase p85 $\alpha$  shRNA (h) Lentiviral Particles: sc-36217-V and PI 3-kinase p85 $\alpha$  shRNA (m) Lentiviral Particles: sc-36218-V.

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

Positive Controls: PI 3-kinase p85 $\alpha$  (m): 293T Lysate: sc-122557, NIH/3T3 whole cell lysate: sc-2210 or COLO 320DM cell lysate: sc-2226.

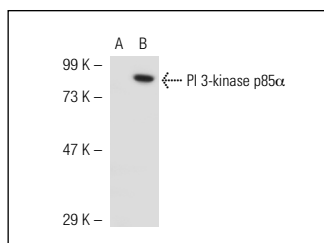
## STORAGE

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

## RESEARCH USE

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

## DATA



PI 3-kinase p85 $\alpha$  (N-18): sc-31969. 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

- Mazina, O., et al. 2004. Studies on the mechanism of rapid activation of protein tyrosine phosphorylation activities, particularly c-Src kinase, by TCDD in MCF10A. *J. Biochem. Mol. Toxicol.* 18: 313-321.
- Chrysis, D., et al. 2005. Dexamethasone induces apoptosis in proliferative chondrocytes through activation of caspases and suppression of the Akt-phosphatidylinositol 3'-kinase signaling pathway. *Endocrinology* 146: 1391-1397.
- Colomiere, M., et al. 2009. Defective Insulin signaling in placenta from pregnancies complicated by gestational diabetes mellitus. *Eur. J. Endocrinol.* 160: 567-578.
- Gong, X.G., et al. 2010. Gemcitabine resistance induced by interaction between alternatively spliced segment of tenascin-C and annexin A2 in pancreatic cancer cells. *Biol. Pharm. Bull.* 33: 1261-1267.
- Sanchez, A.M., et al. 2010. Estrogen receptor- $\alpha$  promotes breast cancer cell motility and invasion via focal adhesion kinase and N-WASP. *Mol. Endocrinol.* 24: 2114-2125.
- Sanchez, A.M., et al. 2011. Estrogen receptor- $\alpha$  promotes endothelial cell motility through focal adhesion kinase. *Mol. Hum. Reprod.* 17: 219-226.

## PROTOCOLS

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



Try **PI 3-kinase p85 $\alpha$ / $\beta$ / $\gamma$  (D-9): sc-374534** or **PI 3-kinase p85 $\alpha$  (C-1): sc-376112**, our highly recommended monoclonal alternatives to PI 3-kinase p85 $\alpha$  (N-18). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **PI 3-kinase p85 $\alpha$ / $\beta$ / $\gamma$  (D-9): sc-374534**.