

# PI 3-kinase p110 $\gamma$ (N-16): sc-1404

## 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 p85 $\beta$ , 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: PIK3CG (human) mapping to 7q22.3; Pik3cg (mouse) mapping to 12 A3.

## SOURCE

PI 3-kinase p110 $\gamma$  (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PI 3-kinase p110 $\gamma$  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-1404 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PI 3-kinase p110 $\gamma$  (N-16) is recommended for detection of PI 3-kinase p110 $\gamma$  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 p110 $\gamma$  (N-16) is also recommended for detection of PI 3-kinase p110 $\gamma$  in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PI 3-kinase p110 $\gamma$  siRNA (h): sc-39129, PI 3-kinase p110 $\gamma$  siRNA (m): sc-39130, PI 3-kinase p110 $\gamma$  shRNA Plasmid (h): sc-39129-SH, PI 3-kinase p110 $\gamma$  shRNA Plasmid (m): sc-39130-SH, PI 3-kinase p110 $\gamma$  shRNA (h) Lentiviral Particles: sc-39129-V and PI 3-kinase p110 $\gamma$  shRNA (m) Lentiviral Particles: sc-39130-V.

Molecular Weight of PI 3-kinase p110 $\gamma$ : 110 kDa.

Positive Controls: U-937 cell lysate: sc-2239, PI 3-kinase p110 $\gamma$  (h2): 293 Lysate: sc-158848 or PI 3-kinase p110 $\gamma$  (h): 293T Lysate: sc-115447.

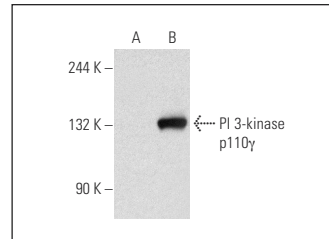
## STORAGE

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

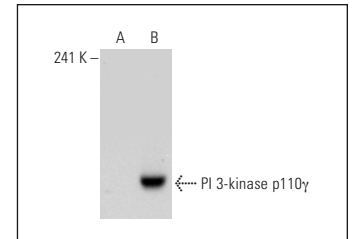
## RESEARCH USE

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

## DATA



PI 3-kinase p110 $\gamma$  (N-16): sc-1404. Western blot analysis of PI 3-kinase p110 $\gamma$  expression in non-transfected: sc-110760 (A) and human PI 3-kinase p110 $\gamma$  transfected: sc-158848 (B) 293 whole cell lysates.



PI 3-kinase p110 $\gamma$  (N-16): sc-1404. Western blot analysis of PI 3-kinase p110 $\gamma$  expression in non-transfected: sc-117752 (A) and human PI 3-kinase p110 $\gamma$  transfected: sc-115447 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Sasaki, T., et al. 2000. Colorectal carcinomas in mice lacking the catalytic subunit of PI(3)K $\gamma$ . *Nature* 406: 897-902.
- Quignard, J.F., et al. 2001. Phosphoinositide 3-kinase mediates angiotensin II-induced stimulation of L-type calcium channels in vascular myocytes. *J. Biol. Chem.* 276: 32545-32551.
- Zhainazarov, A.B., et al. 2001. Odor-stimulated phosphatidylinositol 3-kinase in lobster olfactory receptor cells. *J. Neurophysiol.* 86: 2537-2544.
- Segrelles, C., et al. 2002. Functional roles of Akt signaling in mouse skin tumorigenesis. *Oncogene* 21: 53-64.
- Kuan, Y.H., et al. 2006. Activation of phosphoinositide 3-kinase and Src family kinase is required for respiratory burst in rat neutrophils stimulated with artocarpol A. *Biochem. Pharmacol.* 71: 1735-1746.
- Kuan, Y.H., et al. 2006. Effective attenuation of acute lung injury *in vivo* and the formyl peptide-induced neutrophil activation *in vitro* by CYL-26z through the phosphoinositide 3-kinase  $\gamma$  pathway. *Biochem. Pharmacol.* 72: 749-760.
- Nishio, M., et al. 2007. Control of cell polarity and motility by the PtdIns(3,4,5)P3 phosphatase SHIP1. *Nat. Cell Biol.* 9: 36-44.
- Zuo, H., et al. 2009. CD151 gene delivery after myocardial infarction promotes functional neovascularization and activates FAK signaling. *Mol. Med.* 15: 307-315.
- Liu, W.F., et al. 2011. Role of tetraspanin CD151- $\alpha$ 3/ $\alpha$ 6 integrin complex: Implication in angiogenesis CD151-integrin complex in angiogenesis. *Int. J. Biochem. Cell Biol.* 43: 642-650.


 MONOS  
Satisfation  
Guaranteed

Try **PI 3-kinase p110 $\gamma$  (D-12): sc-166365**, our highly recommended monoclonal alternative to PI 3-kinase p110 $\gamma$  (N-16).