

# PI 3-kinase p110 $\beta$ (N-20): sc-603

## 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: PIK3CB (human) mapping to 3q22.3.

## SOURCE

PI 3-kinase p110 $\beta$  (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of PI 3-kinase p110 $\beta$  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-603 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PI 3-kinase p110 $\beta$  (N-20) is recommended for detection of PI 3-kinase p110 $\beta$  of 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), 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 p110 $\beta$  (N-20) is also recommended for detection of PI 3-kinase p110 $\beta$  in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PI 3-kinase p110 $\beta$  siRNA (h): sc-37269, PI 3-kinase p110 $\beta$  shRNA Plasmid (h): sc-37269-SH and PI 3-kinase p110 $\beta$  shRNA (h) Lentiviral Particles: sc-37269-V.

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

Positive Controls: K-562 whole cell lysate: sc-2203, C32 whole cell lysate: sc-2205 or HUV-EC-C whole cell lysate: sc-364180.

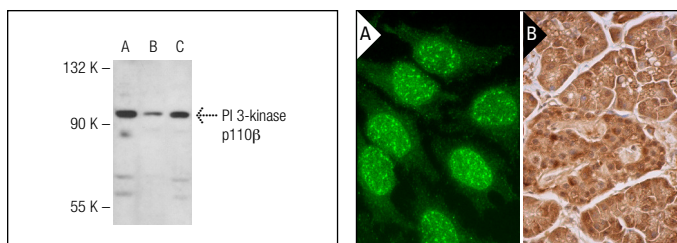
## STORAGE

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 $\beta$  (N-20): sc-603. Western blot analysis of PI 3-kinase p110 $\beta$  expression in K-562 (A), C32 (B) and HUV-EC-C (C) whole cell lysates.

PI 3-kinase p110 $\beta$  (N-20): sc-603. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of exocrine glandular cells and Islets of Langerhans (B).

## SELECT PRODUCT CITATIONS

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- Fernandez-Twinn, D.S., et al. 2005. Maternal protein restriction leads to hyperinsulinemia and reduced Insulin-signaling protein expression in 21-mo-old female rat offspring. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 288: R368-R373.
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- Shelley, P., et al. 2009. Altered skeletal muscle Insulin signaling and mitochondrial complex II-III linked activity in adult offspring of obese mice. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 297: R675-R681.

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Try **PI 3-kinase p110 $\beta$  (C-8): sc-376641** or **PI 3-kinase p110 $\beta$  (D-2): sc-376492**, our highly recommended monoclonal alternatives to PI 3-kinase p110 $\beta$  (N-20).