SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p110α (N-20): sc-1332

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (p85α and p85β), each possessing one SH3 and two SH2 domains. Various p110 isoforms have been identified. p110α and p110β interact with p85α, and p110α has also been shown to interact with p85β *in vitro*. p110δ expression is restricted to white blood cells. It has been shown to bind p85α and p85β, but it apparently does not phosphorylate these subunits. p110δ seems to have the capacity to autophosphorylate. p110γ does not interact with the p85 subunits. It has been shown to be activated by α and βγ heterotrimeric G proteins.

CHROMOSOMAL LOCATION

Genetic locus: PIK3CA (human) mapping to 3q26.32; Pik3ca (mouse) mapping to 3 A3.

SOURCE

PI 3-kinase p110α (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PI 3-kinase p110α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1332 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PI 3-kinase p110α (N-20) is recommended for detection of PI 3-kinase p110α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 p110α (N-20) is also recommended for detection of PI 3-kinase p110α in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for PI 3-kinase p110α siRNA (h): sc-39127, PI 3-kinase p110α siRNA (m): sc-39128, PI 3-kinase p110α shRNA Plasmid (h): sc-39127-SH, PI 3-kinase p110α shRNA Plasmid (m): sc-39128-SH, PI 3-kinase p110α shRNA (h) Lentiviral Particles: sc-39127-V and PI 3-kinase p110α shRNA (m) Lentiviral Particles: sc-39128-V.

Molecular Weight of PI 3-kinase p110α: 110 kDa.

Positive Controls: C32 whole cell lysate: sc-2205.

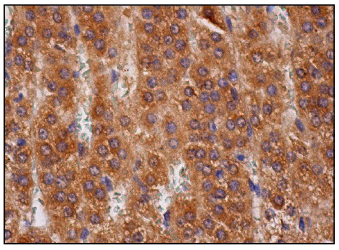
RESEARCH USE

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

STORAGE

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

DATA



PI 3-kinase p110α (N-20): sc-1332. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Rubio, I., et al. 1997. Interaction of Ras with phosphoinositide 3-kinase γ. Biochem. J. 326: 891-895.
2. Keely, P.J., et al. 1997. Cdc42 and Rac1 induce integrin-mediated cell motility and invasiveness through PI 3-kinase. Nature 390: 632-636.
3. Fukao, T., et al. 2002. Selective loss of gastrointestinal mast cells and impaired immunity PI 3-kinase-deficient mice. Nat. Immunol. 3: 295-304.
4. Barbee, S.D., et al. 2005. Phosphatidylinositol 3-kinase regulates thymic exit. J. Immunol. 174: 1230-1238.
5. Wang, Y., et al. 2006. Class II phosphoinositide 3-kinase α-isoform regulates Rho, Myosin phosphatase and contraction in vascular smooth muscle. Biochem. J. 394: 581-592.
6. Acosta, Y.Y., et al. 2010. Biased binding of class IA phosphatidyl inositol 3-kinase subunits to inducible costimulator (CD278). Cell. Mol. Life Sci. 68: 3065-3079.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.