SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p85α (2B2.79): sc-71891

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

SOURCE

PI 3-kinase p85α (2B2.79) is a mouse monoclonal antibody raised against recombinant PI 3-kinase p85α of bovine origin.

PRODUCT

Each vial contains 1 ml culture supernatant containing IgG_1 with < 0.1% sodium azide.

APPLICATIONS

PI 3-kinase p85α (2B2.79) is recommended for detection of the SH3 domain of PI 3-kinase p85α 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 µl per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with the p85β isoform.

PI 3-kinase p85α (2B2.79) is also recommended for detection of the SH3 domain of PI 3-kinase p85α in additional species, including bovine.

Suitable for use as control antibody for PI 3-kinase p85α siRNA (h): sc-36217, PI 3-kinase p85α siRNA (m): sc-36218, PI 3-kinase p85α siRNA (r): sc-156021, PI 3-kinase p85α shRNA Plasmid (h): sc-36217-SH, PI 3-kinase p85α shRNA Plasmid (m): sc-36218-SH, PI 3-kinase p85α shRNA Plasmid (r): sc-156021-SH, PI 3-kinase p85α shRNA (h) Lentiviral Particles: sc-36217-V, PI 3-kinase p85α shRNA (m) Lentiviral Particles: sc-36218-V and PI 3-kinase p85α shRNA (r) Lentiviral Particles: sc-156021-V.

Molecular Weight of PI 3-kinase p85α: 85 kDa.

Positive Controls: PI 3-kinase p85α (m): 293T Lysate: sc-122557, Caki-1 cell lysate: sc-2224 or COLO 320DM cell lysate: sc-2226.

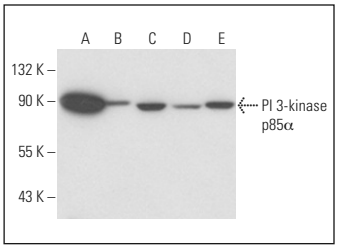
STORAGE

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.

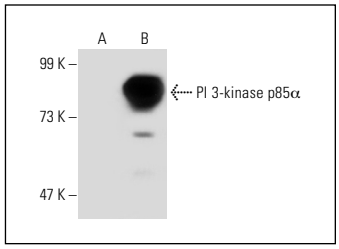
RESEARCH USE

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

DATA



PI 3-kinase p85α (2B2.79): sc-71891. Western blot analysis of PI 3-kinase p85α expression in U-937 (**A**), Caki-1 (**B**), COLO 320DM (**C**), SW480 (**D**) and NIH/3T3 (**E**) whole cell lysates.



PI 3-kinase p85α (2B2.79): sc-71891. Western blot analysis of PI 3-kinase p85α expression in non-transfected: sc-117752 (**A**) and mouse PI 3-kinase p85α transfected: sc-122557 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, C.C., et al. 2016. Cannabinoid receptor type 1 mediates high-fat diet-induced Insulin resistance by increasing forkhead box O1 activity in a mouse model of obesity. Int. J. Mol. Med. 37: 743-754.
2. Wang, K., et al. 2017. The role of angiopoietin-2 in nucleus pulposus cells during human intervertebral disc degeneration. Lab. Invest. 97: 971-982.
3. Xu, M., et al. 2018. SB225002 inhibits prostate cancer invasion and attenuates the expression of BSP, OPN and MMP-22. Oncol. Rep. 40: 726-736.
4. Peng, C.C., et al. 2019. Renal damaging effect elicited by bicalutamide therapy uncovered multiple action mechanisms as evidenced by the cell model. Sci. Rep. 9: 3392.
5. Johnson, J., et al. 2020. Targeting PI3K and AMPKα signaling alone or in combination to enhance radiosensitivity of triple negative breast cancer. Cells 9: E1253.

PROTOCOLS

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