SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p85α (B-9): sc-1637

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 (B-9) is a mouse monoclonal antibody raised against amino acids 333-430 mapping within the N-terminus SH2 domain of the 85 kDa subunit of PI 3-kinase p85α of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase p85α (B-9) is available conjugated to either Alexa Fluor® 546 (sc-1637 AF546) or Alexa Fluor® 594 (sc-1637 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-1637 AF680) or Alexa Fluor® 790 (sc-1637 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

PI 3-kinase p85α (B-9) is recommended for detection of PI 3-kinase p85α 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

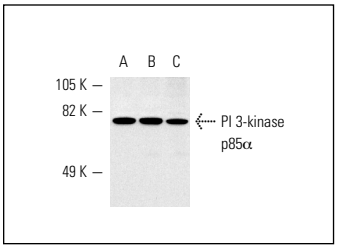
Molecular Weight of PI 3-kinase p85α: 85 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, Caki-1 cell lysate: sc-2224 or SW480 cell lysate: sc-2219.

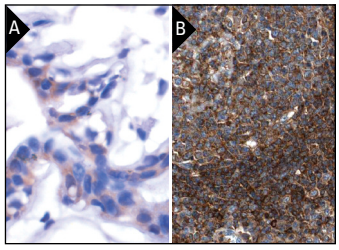
STORAGE

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 p85α (B-9): sc-1637. Western blot analysis of PI 3-kinase p85α expression in Caki-1 (**A**), COLO 320DM (**B**) and SW480 (**C**) whole cell lysates.



PI 3-kinase p85α (B-9): sc-1637. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of follicle and non-follicle cells and surface epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Widmann, C., et al. 1998. Caspase-dependent cleavage of signaling proteins during apoptosis. A turn-off mechanism for anti-apoptotic signals. J. Biol. Chem. 273: 7141-7147.
2. Gupta, K., et al. 2018. Sorcin is involved during embryo implantation via activating VEGF/PI3K/Akt pathway in mice. J. Mol. Endocrinol. 60: 119-132.
3. Mahajan, U.B., et al. 2018. Eplerenone pretreatment protects the myocardium against ischaemia/reperfusion injury through the phosphatidylinositol 3-kinase/Akt-dependent pathway in diabetic rats. Mol. Cell. Biochem. 446: 91-103.
4. Sun, L., et al. 2018. NPPB modulates apoptosis, proliferation, migration and extracellular matrix synthesis of conjunctival fibroblasts by inhibiting PI3K/AKT signaling. Int. J. Mol. Med. 41: 1331-1338.
5. Lan, D., et al. 2018. Electroacupuncture mitigates endothelial dysfunction via effects on the PI3K/Akt signalling pathway in high fat diet-induced Insulin-resistant rats. Acupunct. Med. 36: 162-169.
6. Khaket, T.P., et al. 2018. Targeting of cathepsin C induces autophagic dysregulation that directs ER stress mediated cellular cytotoxicity in colorectal cancer cells. Cell. Signal. 46: 92-102.
7. Chin, HK., et al. 2018. Kaempferol inhibits angiogenic ability by targeting VEGF receptor-2 and downregulating the PI3K/AKT, MEK and ERK pathways in VEGF-stimulated human umbilical vein endothelial cells. Oncol. Rep. 39: 2351-2357.

RESEARCH USE

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