SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p110γ (H-199): sc-7177

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: PIK3CG (human) mapping to 7q22.3; Pik3cg (mouse) mapping to 12 A3.

SOURCE

PI 3-kinase p110γ (H-199) is a rabbit polyclonal antibody raised against amino acids 331-530 mapping at the N-terminus of PI 3-kinase p110γ 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.

APPLICATIONS

PI 3-kinase p110γ (H-199) is recommended for detection of PI 3-kinase p110γ 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 p110γ (H-199) is also recommended for detection of PI 3-kinase p110γ in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for PI 3-kinase p110γ siRNA (h): sc-39129, PI 3-kinase p110γ siRNA (m): sc-39130, PI 3-kinase p110γ shRNA Plasmid (h): sc-39129-SH, PI 3-kinase p110γ shRNA Plasmid (m): sc-39130-SH, PI 3-kinase p110γ shRNA (h) Lentiviral Particles: sc-39129-V and PI 3-kinase p110γ shRNA (m) Lentiviral Particles: sc-39130-V.

Molecular Weight of PI 3-kinase p110γ: 110 kDa.

Positive Controls: PI 3-kinase p110γ (h): 293T Lysate: sc-115447 or U-937 cell lysate: sc-2239.

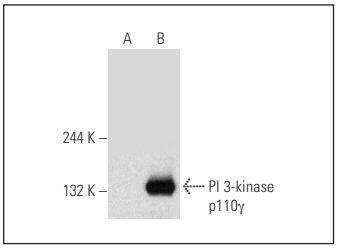
STORAGE

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

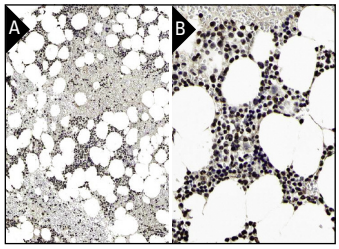
RESEARCH USE

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

DATA



PI 3-kinase p110γ (H-199): sc-7177. Western blot analysis of PI 3-kinase p110γ expression in non-transfected: sc-110760 (**A**) and human PI 3-kinase p110γ transfected: sc-158848 (**B**) 293 whole cell lysates.



PI 3-kinase p110γ (H-199): sc-7177. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear staining of bone marrow poietic cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

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2. Boca, M., et al. 2006. Polycystin-1 induces resistance to apoptosis through the phosphatidylinositol 3-kinase/Akt signaling pathway. J. Am. Soc. Nephrol. 17: 637-647.
3. Falasca, M., et al. 2007. The role of phosphoinositide 3-kinase C2α in Insulin signaling. J. Biol. Chem. 282: 28226-28236.
4. Yano, N., et al. 2007. A novel signaling pathway for β-adrenergic receptor-mediated activation of phosphoinositide 3-kinase in H9c2 cardiomyocytes. Am. J. Physiol. Heart Circ. Physiol. 293: H385-H393.
5. Schymeinsky, J., et al. 2007. Syk-mediated translocation of PI3Kδ to the leading edge controls lamellipodium formation and migration of leukocytes. PLoS ONE 2: e1132.
6. Bogazzi, F., et al. 2009. Reduced colonic apoptosis in mice overexpressing bovine growth hormone occurs through changes in several kinase pathways. Growth Horm. IGF Res. 19: 432-441.
7. Fry, M.J. 2009. Phosphoinositide (PI) 3-kinase assays. Methods Mol. Biol. 462: 345-362.
8. Hohenester, S., et al. 2010. Phosphatidylinositol-3-kinase p110γ contributes to bile salt-induced apoptosis in primary rat hepatocytes and human hepatoma cells. J. Hepatol. 53: 918-926.
9. Spitzenberg, V., et al. 2010. Targeting PI3K in neuroblastoma. J. Cancer Res. Clin. Oncol. 136: 1881-1890.