SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase C2β (C-14): sc-48630

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphoinositide 3-kinases (PI 3-Ks) phosphorylate the 3'-OH position of the inositol ring of inositol lipids. They act as participants in signaling pathways that regulate cell growth by virtue of their activation in response to various mitogenic stimuli. PI 3-Ks are composed of a catalytic subunit, such as PI 3-Kinase C2β (PIK3CB) and an adaptor subunit. PI 3-Kinase C2β, also known as p110-β, is a 1,070 amino acid protein that shares 42% identity with that of p110 of cow origin. It is expressed in several human and rodent cell lines. Studies predict that PI 3-Kinase C2β has a role in modulating the formation and stability of α2B (ITGA2B)/β3 (ITGB3) Integrin adhesion bonds, which are essential in shear force-induced platelet activation.

REFERENCES

1. Hu, P., et al. 1993. Cloning of a novel, ubiquitously expressed human phosphatidylinositol 3-kinase and identification of its binding site on p85. Mol. Cell. Biol. 13: 7677-7688.
2. Roche, S., et al. 1998. A function for phosphatidylinositol 3-kinase β (p85α-p110β) in fibroblasts during mitogenesis: requirement for insulin- and lysophosphatidic acid-mediated signal transduction. Mol. Cell. Biol. 18: 7119-7129.
3. Kossila, M., et al. 2000. Gene encoding the catalytic subunit p110β of human phosphatidylinositol 3-kinase: cloning, genomic structure, and screening for variants in patients with type 2 diabetes. Diabetes 49: 1740-1743.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602925. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Jackson, S.P., et al. 2005. PI 3-kinase p110β: a new target for antithrombotic therapy. Nat. Med. 11: 507-514.

CHROMOSOMAL LOCATION

Genetic locus: PIK3C2B (human) mapping to 1q32.1.

SOURCE

PI 3-kinase C2β (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PI 3-kinase C2β 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-48630 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PI 3-kinase C2β (C-14) is recommended for detection of PI 3-kinase C2β of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PI 3-kinase C2β (C-14) is also recommended for detection of PI 3-kinase C2β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PI 3-kinase C2β siRNA (h): sc-61346, PI 3-kinase C2β shRNA Plasmid (h): sc-61346-SH and PI 3-kinase C2β shRNA (h) Lentiviral Particles: sc-61346-V.

Molecular Weight of PI 3-kinase: C2β: 185 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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