SANTA CRUZ BIOTECHNOLOGY, INC.

PI 4-kinase β (V-20): sc-46457

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The Power to Question

BACKGROUND

The members of the phosphatidylinositol kinase (PIK) superfamily can be divided into three groups based on their substrate specificity. PIKs convert phosphatidylinositol (PI) into PI phosphate [PI(3)P], PI phosphate [PI(4)P], PI bisphosphate [PI(4, 5)P2] and PI triphosphate [PI(3, 4,5)P3]. The first group, the PI 3-kinases, is composed of highly related proteins designated p110α, p110β, p110γ and p110δ which convert PI into PI(3)P and PI(4, 5)P2 into PI(3, 4, 5)P3. The second group, the PI 4-kinases, convert PI into PI(4)P. The third group, the PI(4)P5-kinases, convert PI(4)P into PI(4, 5)P2. Phosphatidylinositides represent important regulatory molecules and are involved in a diverse array of signaling pathways. Phosphatidylinositol biphosphate acts as an activator of PKCs and as a substrate for PLCγ, which converts the molecule into the second messengers, Inositol-1, 4, 5 triphosphate and 1, 2-diacylglycerol. PI(3, 4, 5)P3 has been shown to activate the PKC ζ isoform. PI 4-kinase β is a cytoplasmic protein inhibited by Wortmannin.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PI4KB (human) mapping to 1q21.3; Pi4kb (mouse) mapping to 3 F2.1.

SOURCE

PI 4-kinase β (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PI 4-kinase β 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-46457 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PI 4-kinase β (V-20) is recommended for detection of PI 4-kinase β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 4-kinase β (V-20) is also recommended for detection of PI 4-kinase β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PI 4-kinase β siRNA (h): sc-45716, PI 4-kinase β siRNA (m): sc-45717, PI 4-kinase β shRNA Plasmid (h): sc-45716-SH, PI 4-kinase β shRNA Plasmid (m): sc-45717-SH, PI 4-kinase β shRNA (h) Lentiviral Particles: sc-45716-V and PI 4-kinase β shRNA (m) Lentiviral Particles: sc-45717-V.

Molecular Weight of PI 4-kinase β: 110 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, SK-N-SH cell lysate: sc-2410 or A-431 whole cell lysate: sc-2201.

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) 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.

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.

PROTOCOLS

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