SANTA CRUZ BIOTECHNOLOGY, INC.

PI 4-kinase II α (N-24): sc-130231

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphatidylinositol (PI) kinases participate in the first step in activating important cellular effectors, such as PIP2 (phosphatidylinositol bisphosphate) and PTEN. Unlike other PI-kinases, PI 4-kinase family members only phosphorylate phosphatidylinositols, are potently inhibited by adenosine and lack a transmembrane domain. Total PI 4-kinase activity is dependent upon PI 4-kinase β, PI 4-kinase α, PI 4-kinase II α and PI 4-kinase II β activities. PI 4-kinase II α (phosphatidylinositol 4-kinase type 2-α) is a 479 amino acid protein that cooperates with other PI 4-kinases to phosphorylate PI to PI4P at the D-4 position, which is the first committed step in producing PIP2. Highly expressed in heart, placenta, skeletal muscle, brain and kidney, PI 4-kinase II α can also be found at lower levels in thymus, small intestine and colon.

REFERENCES

1. Barylko, B., Gerber, S.H., Binns, D.D., Grichine, N., Khvotchev, M., Südhof, T.C. and Albanesi, J.P. 2001. A novel family of phosphatidylinositol 4-kinases conserved from yeast to humans. J. Biol. Chem. 276: 7705-7708.
2. Minogue, S., Anderson, J.S., Waugh, M.G., dos Santos, M., Corless, S., Cramer, R. and Hsuan, J.J. 2001. Cloning of a human type II phosphatidylinositol 4-kinase reveals a novel lipid kinase family. J. Biol. Chem. 276: 16635-16640.

CHROMOSOMAL LOCATION

Genetic locus: PI4K2A (human) mapping to 10q24.2.

SOURCE

PI 4-kinase II α (N-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of PI 4-kinase II α of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PI 4-kinase II α (N-24) is recommended for detection of PI 4-kinase II α 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), 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).

Suitable for use as control antibody for PI 4-kinase II α siRNA (h): sc-90773, PI 4-kinase II α shRNA Plasmid (h): sc-90773-SH and PI 4-kinase II α shRNA (h) Lentiviral Particles: sc-90773-V.

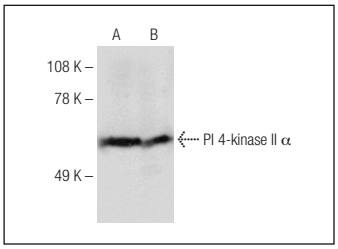
Molecular Weight of PI 4-kinase II α: 52 kDa.

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

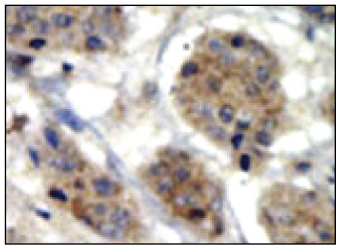
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PI 4-kinase II α (N-24): sc-130231. Western blot analysis of PI 4-kinase II α expression in A-431 (**A**) and HeLa (**B**) whole cell lysates.



PI 4-kinase II α (N-24):sc-130231. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cancer tissue showing cytoplasmic staining.

STORAGE8

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.