SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p55γ (N-13): sc-48644

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphatidylinositol 3-kinase is a lipid kinase that phosphorylates the inositol ring of phosphatidylinositol and related compounds at the 3' position. PI 3-kinase p55γ (PIK3R3) is comprised of a catalytic subunit and a regulatory subunit. The human p55γ protein is composed of a rare amino terminal region followed by a proline-rich motif and two Src homology 2 (SH2) domains. PI 3-kinase p55γ mRNAs are expressed in most human fetal and adult tissues; predominant expression is observed in the adult testis. Splice variants of PI 3-kinase p55γ have been identified, one which has a deletion of 36 amino acids at the amino-terminus and another which has an insertion of 59 amino acids at position 256 between the SH2 domains. Research suggests that PI 3-kinase p55γ interacts with the IGF-IR (Insulin-like growth factor-I receptor) and IR (Insulin receptor) and may be involved in PI 3-kinase activation by these receptors.

CHROMOSOMAL LOCATION

Genetic locus: PIK3R3 (human) mapping to 1p34.1; Pik3r3 (mouse) mapping to 4 D1.

SOURCE

PI 3-kinase p55γ (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PI 3-kinase p55γ 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-48644 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PI 3-kinase p55γ (N-13) is recommended for detection of PI 3-kinase p55γ isoforms 1, 2 and 3 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 p55γ (N-13) is also recommended for detection of PI 3-kinase p55γ isoforms 1, 2 and 3 in additional species, including equine.

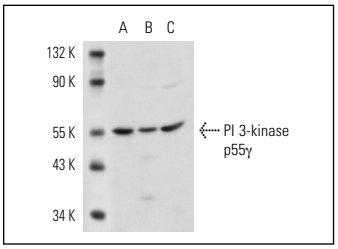
Suitable for use as control antibody for PI 3-kinase p55γ siRNA (h): sc-39124, PI 3-kinase p55γ siRNA (m): sc-61345, PI 3-kinase p55γ shRNA Plasmid (h): sc-39124-SH, PI 3-kinase p55γ shRNA Plasmid (m): sc-61345-SH, PI 3-kinase p55γ shRNA (h) Lentiviral Particles: sc-39124-V and PI 3-kinase p55γ shRNA (m) Lentiviral Particles: sc-61345-V.

Positive Controls: SK-N-MC cell lysate: sc-2237, MCF7 whole cell lysate: sc-2206 or BE (2)-M17 cell lysate.

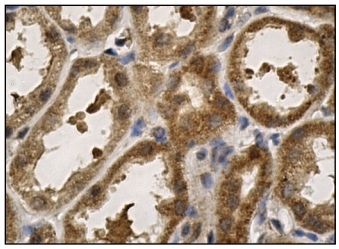
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PI 3-kinase p55γ (N-13): sc-48644. Western blot analysis of PI 3-kinase p55γ expression in SK-N-MC (**A**), MCF7 (**B**) and BE (2)-M17 (**C**) whole cell lysates.



PI 3-kinase p55γ (N-13): sc-48644. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Acosta, Y.Y., et al. 2010. Biased binding of class IA phosphatidyl inositol 3-kinase subunits to inducible costimulator (CD278). Cell. Mol. Life Sci. 68: 3065-3079.

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.