SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p85α (D-3): sc-377482

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: PIK3R1 (human) mapping to 5q13.1; Pik3r1 (mouse) mapping to 13 D1.

SOURCE

PI 3-kinase p85α (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 27-65 near the N-terminus of PI 3-kinase p85α of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377482 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PI 3-kinase p85α (D-3) is recommended for detection of PI 3-kinase p85α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 p85α (D-3) is also recommended for detection of PI 3-kinase p85α in additional species, including canine.

Suitable for use as control antibody for PI 3-kinase p85α siRNA (h): sc-36217, PI 3-kinase p85α siRNA (m): sc-36218, PI 3-kinase p85α siRNA (r): sc-156021, PI 3-kinase p85α shRNA Plasmid (h): sc-36217-SH, PI 3-kinase p85α shRNA Plasmid (m): sc-36218-SH, PI 3-kinase p85α shRNA Plasmid (r): sc-156021-SH, PI 3-kinase p85α shRNA (h) Lentiviral Particles: sc-36217-V, PI 3-kinase p85α shRNA (m) Lentiviral Particles: sc-36218-V and PI 3-kinase p85α shRNA (r) Lentiviral Particles: sc-156021-V.

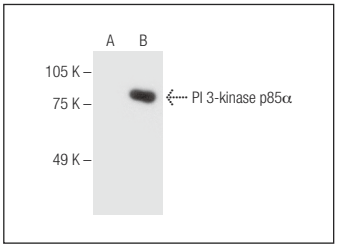
Molecular Weight of PI 3-kinase p85α: 85 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Caki-1 cell lysate: sc-2224 or PI 3-kinase p85α (m): 293T Lysate: sc-122557.

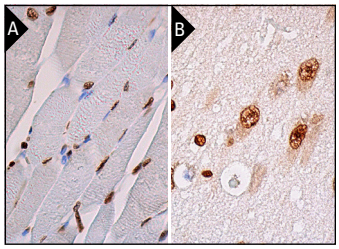
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PI 3-kinase p85α (D-3): sc-377482. Western blot analysis of PI 3-kinase p85α expression in non-transfected: sc-117752 (**A**) and mouse PI 3-kinase p85α transfected: sc-122557 (**B**) 293T whole cell lysates.



PI 3-kinase p85α (D-3): sc-377482. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing nuclear staining of myocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear staining of neuronal cells, glial cells and endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Yan, W., et al. 2015. Chronic blockade of class I PI3-kinase attenuates Ang II-induced cardiac hypertrophy and autophagic alteration. Eur. Rev. Med. Pharmacol. Sci. 19: 772-783.
2. Zhao, H., et al. 2015. Protective effects of monosialotetrahexosylganglioside sodium on H_2O_2-induced human vascular endothelial cells. Exp. Ther. Med. 10: 947-953.
3. You, X., et al. 2017. Endogenous hydrogen sulfide contributes to uterine quiescence during pregnancy. Reproduction 153: 535-543.

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 for detailed protocols and support products.