SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p110α (E-7): sc-518070

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.

REFERENCES

1. Skolnik, E.Y., et al. 1991. Cloning of PI3 kinase-associated p85 utilizing a novel method for expression/cloning of target proteins for receptor tyrosine kinases. Cell 65: 83-90.
2. Otsu, M., et al. 1991. Characterization of two 85 kDa proteins that associate with receptor tyrosine kinases, middle-T/pp60-src complexes and PI 3-kinase. Cell 65: 91-104.
3. Hiles, I.D., et al. 1992. Phosphatidylinositol 3-kinase: structure and expression of the 110 kDa catalytic subunit. Cell 70: 419-429.
4. 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.
5. Stoyanov, B., et al. 1995. Cloning and characterization of a G protein-activated human phosphoinositide-3 kinase. Science 269: 690-693.
6. Vanhaesebroeck, B., et al. 1997. p110δ, a novel phosphoinositide 3-kinase in leukocytes. Proc. Natl. Acad. Sci. USA 94: 4330-4335.

CHROMOSOMAL LOCATION

Genetic locus: PIK3CA (human) mapping to 3q26.32.

SOURCE

PI 3-kinase p110α (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1002-1029 at the C-terminus of PI 3-kinase p110α of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase p110α (E-7) is available conjugated to agarose (sc-518070 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518070 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518070 PE), fluorescein (sc-518070 FITC), Alexa Fluor® 488 (sc-518070 AF488), Alexa Fluor® 546 (sc-518070 AF546), Alexa Fluor® 594 (sc-518070 AF594) or Alexa Fluor® 647 (sc-518070 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518070 AF680) or Alexa Fluor® 790 (sc-518070 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PI 3-kinase p110α (E-7) is recommended for detection of PI 3-kinase p110α of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

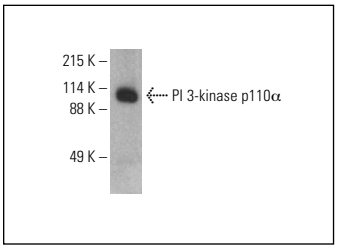
Suitable for use as control antibody for PI 3-kinase p110α siRNA (h): sc-39127, PI 3-kinase p110α shRNA Plasmid (h): sc-39127-SH and PI 3-kinase p110α shRNA (h) Lentiviral Particles: sc-39127-V.

Molecular Weight of PI 3-kinase p110 α: 110 kDa.

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 A/G PLUS-Agarose: sc-2003 (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.

DATA



PI 3-kinase p110α (E-7): sc-518070. Western blot analysis of full length human recombinant PI 3-kinase p110α.

SELECT PRODUCT CITATIONS

1. Kato, Y., et al. 2022. CRISPR/CasRx-mediated RNA knockdown reveals that ACE2 is involved in the regulation of oligodendroglial cell morphological differentiation. Noncoding RNA 8: 42.

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.