SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p101 (E-12): sc-390916

BACKGROUND

PI 3-kinase p101 is an 880 amino acid protein that acts as a regulatory subunit of the PI3 kinase γ complex. PI 3-kinase p101 interacts with PI 3-kinase p110γ to form the PI3 kinase γ complex, which is activated by $G_{\beta\gamma}$ proteins and plays a role in many physiological processes, such as cardiac function, neutrophil chemotaxis and mast cell degranulation. Specifically, the PI3 kinase γ complex is involved in suppression of apoptosis, cellular transport and cell motility. Binding of the PI 3-kinase p110γ subunit to PI 3-kinase p101 is dependent on the N-terminal region of PI 3-kinase p101. With highest expression in leukocytes, spleen lymph node thymus and bone marrow, PI 3-kinase p101 is subcellularly located in the nucleus, cytoplasm, or it can exist as a peripheral membrane protein. There are two isoforms of PI 3-kinase p101 that are produced as a result of alternative splicing.

CHROMOSOMAL LOCATION

Genetic locus: PIK3R5 (human) mapping to 17p13.1.

SOURCE

PI 3-kinase p101 (E-12) is a mouse monoclonal antibody raised against amino acids 581-880 mapping at the C-terminus of PI 3-kinase p101 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase p101 (E-12) is available conjugated to agarose (sc-390916 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390916 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390916 PE), fluorescein (sc-390916 FITC), Alexa Fluor® 488 (sc-390916 AF488), Alexa Fluor® 546 (sc-390916 AF546), Alexa Fluor® 594 (sc-390916 AF594) or Alexa Fluor® 647 (sc-390916 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390916 AF680) or Alexa Fluor® 790 (sc-390916 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PI 3-kinase p101 (E-12) is recommended for detection of PI 3-kinase p101 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 p101 siRNA (h): sc-94221, PI 3-kinase p101 shRNA Plasmid (h): sc-94221-SH and PI 3-kinase p101 shRNA (h) Lentiviral Particles: sc-94221-V.

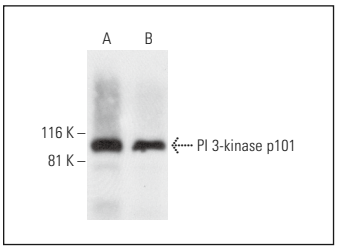
Molecular Weight of PI 3-kinase p101: 101 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225 or AML-193 whole cell lysate: sc-364182.

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 p101 (E-12): sc-390916. Western blot analysis of PI 3-kinase p101 expression in AML-193 (**A**) and CCRF-CEM (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Aasen, S.N., et al. 2019. Effective treatment of metastatic melanoma by combining MAPK and PI3K signaling pathway inhibitors. Int. J. Mol. Sci. 20: 4235.
2. Guo, L. and Yang, T. 2019. Oxymatrine inhibits the proliferation and invasion of breast cancer cells via the PI3K pathway. Cancer Manag. Res. 11: 10499-10508.
3. Jiao, W., et al. 2022. EZH2 mitigates the cardioprotective effects of mesenchymal stem cell-secreted exosomes against infarction via HMGA2-mediated PI3K/Akt signaling. BMC Cardiovasc. Disord. 22: 95.
4. Luo, Q., et al. 2023. Targetable leukemia dependency on noncanonical PI3Kγ signaling. bioRxiv. E-published.

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.