

PI 3-kinase p55 γ (E-9): sc-376615

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 p55 γ (PIK3R3) is comprised of a catalytic subunit and a regulatory subunit. The human p55 γ 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 p55 γ mRNAs are expressed in most human fetal and adult tissues; predominant expression is observed in the adult testis. Splice variants of PI 3-kinase p55 γ have been identified; one of 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 p55 γ interacts with the IGFIR (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.

SOURCE

PI 3-kinase p55 γ (E-9) is a mouse monoclonal antibody raised against amino acids 333-380 mapping within an internal region of PI 3-kinase p55 γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase p55 γ (E-9) is available conjugated to agarose (sc-376615 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376615 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376615 PE), fluorescein (sc-376615 FITC), Alexa Fluor® 488 (sc-376615 AF488), Alexa Fluor® 546 (sc-376615 AF546), Alexa Fluor® 594 (sc-376615 AF594) or Alexa Fluor® 647 (sc-376615 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376615 AF680) or Alexa Fluor® 790 (sc-376615 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PI 3-kinase p55 γ (E-9) is recommended for detection of PI 3-kinase p55 γ of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 p55 γ siRNA (h): sc-39124, PI 3-kinase p55 γ shRNA Plasmid (h): sc-39124-SH and PI 3-kinase p55 γ shRNA (h) Lentiviral Particles: sc-39124-V.

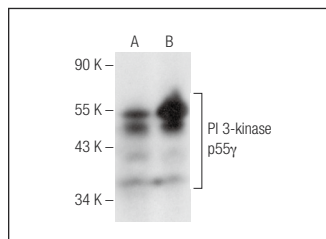
Molecular Weight of PI 3-kinase p55 γ : 55 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237 or MCF7 whole cell lysate: sc-2206.

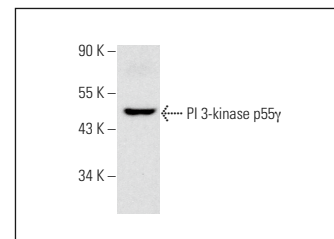
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



PI 3-kinase p55 γ (E-9): sc-376615. Western blot analysis of PI 3-kinase p55 γ expression in SK-N-MC (A) and MCF7 (B) whole cell lysates.



PI 3-kinase p55 γ (E-9): sc-376615. Western blot analysis of PI 3-kinase p55 γ expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

- Zhang, M., et al. 2016. Total velvet-antler polypeptide extract from *Cervus nippon* Temminck induces cell proliferation and activation of the PI3K-Akt signalling pathway in human peripheral blood lymphocytes. Anim. Prod. Sci. E-published.
- Zhang, J., et al. 2017. MicroRNA-212 inhibits colorectal cancer cell viability and invasion by directly targeting PIK3R3. Mol. Med. Rep. 16: 7864-7872.
- Chhabra, R. 2018. let-7i-5p, miR-181a-2-3p and EGF/PI3K/SOX2 axis co-ordinate to maintain cancer stem cell population in cervical cancer. Sci. Rep. 8: 7840.
- Zhao, J., et al. 2018. MicroRNA-411 inhibits malignant biological behaviours of colorectal cancer cells by directly targeting PIK3R3. Oncol. Rep. 39: 633-642.
- Song, Y., et al. 2019. MicroRNA-601 serves as a potential tumor suppressor in hepatocellular carcinoma by directly targeting PIK3R3. Mol. Med. Rep. 19: 2431-2439.
- Harmouch, E., et al. 2020. Flavagline synthetic derivative induces senescence in glioblastoma cancer cells without being toxic to healthy astrocytes. Sci. Rep. 10: 13750.
- Yoon, C., et al. 2021. PIK3R3, part of the regulatory domain of PI3K, is upregulated in sarcoma stem-like cells and promotes invasion, migration, and chemotherapy resistance. Cell Death Dis. 12: 749.
- Najafi, S., et al. 2022. Discovery of a novel class of benzimidazoles as highly effective agonists of bone morphogenetic protein (BMP) receptor signaling. Sci. Rep. 12: 12146.
- Chessa, T.A.M., et al. 2023. PLEKHS1 drives PI3Ks and remodels pathway homeostasis in PTEN-null prostate. Mol. Cell 83: 2991-3009.e13.

RESEARCH USE

For research use only, not for use in diagnostic procedures.