

PI 3-kinase p85 α / β /p55 γ (D-9): sc-374534

BACKGROUND

Phosphatidylinositol 3-kinase (PI 3-kinase) phosphorylates the 3' OH position of the inositol ring of inositol lipids and is composed of p85 and p110 subunits. PI 3-kinase p85 lacks PI 3-kinase activity and acts as an adaptor, coupling p110 to activated protein tyrosine kinase. Both PI 3-kinase p85 α and PI 3-kinase p85 β possess one SH3 and two SH2 domains. PI 3-kinase p85 α , also known as GRB1, phosphatidylinositol 3-kinase regulatory 1 or p85, is a 724 amino acid protein that exists as four alternatively spliced isoforms. Involved in Insulin metabolism, defects in the PI 3-kinase p85 α gene have been linked to Insulin resistance. PI 3-kinase p85 α is polyubiquitinated in T cells by Cbl-b, and has multiple phosphorylated amino acid residues, including a phosphorylated tyrosine residue at position 467. PI 3-kinase p85 γ contains 1,102 amino acids and is encoded by a gene that maps to human chromosome 7.

SOURCE

PI 3-kinase p85 α / β /p55 γ (D-9) is a mouse monoclonal antibody raised against amino acids 323-596 mapping within an internal region of PI 3-kinase p85 β of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PI 3-kinase p85 α / β /p55 γ (D-9) is available conjugated to agarose (sc-374534 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374534 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374534 PE), fluorescein (sc-374534 FITC), Alexa Fluor[®] 488 (sc-374534 AF488), Alexa Fluor[®] 546 (sc-374534 AF546), Alexa Fluor[®] 594 (sc-374534 AF594) or Alexa Fluor[®] 647 (sc-374534 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374534 AF680) or Alexa Fluor[®] 790 (sc-374534 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PI 3-kinase p85 α / β /p55 γ (D-9) is recommended for detection of PI 3-kinase p85 α , PI 3-kinase p85 β and PI 3-kinase p55 γ of mouse, rat and 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), 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 p85 α / β /p55 γ (D-9) is also recommended for detection of PI 3-kinase p85 α , PI 3-kinase p85 β and PI 3-kinase p55 γ in additional species, including canine and bovine.

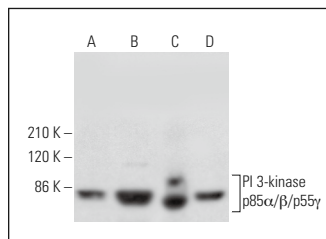
Molecular Weight of PI 3-kinase p85 α / β /p55 γ isoforms: 84/53/50/84 kDa.

Positive Controls: SW480 cell lysate: sc-2219, A-431 whole cell lysate: sc-2201 or COLO 205 whole cell lysate: sc-364177.

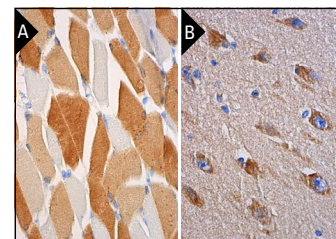
STORAGE

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 p85 α / β /p55 γ (D-9): sc-374534. Western blot analysis of PI 3-kinase p85 α / β /p55 γ expression in SW480 (A), A-431 (B), KNRK (C) and COLO 205 (D) whole cell lysates.



PI 3-kinase p85 α / β /p55 γ (D-9): sc-374534. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells (B).

SELECT PRODUCT CITATIONS

- Ho, H.H., et al. 2013. Gallic acid inhibits gastric cancer cells metastasis and invasive growth via increased expression of RhoB, downregulation of Akt/small GTPase signals and inhibition of NF κ B activity. *Toxicol. Appl. Pharmacol.* 266: 76-85.
- Lakshmikanthan, S., et al. 2015. Rap1 promotes endothelial mechanosensing complex formation, NO release and normal endothelial function. *EMBO Rep.* 16: 628-637.
- Gao, H.W., et al. 2018. Distinct MAPK and PI3K pathway mutations in different melanoma types in Taiwanese individuals. *Eur. J. Dermatol.* 28: 509-518.
- Yu, G., et al. 2019. Formaldehyde induces the apoptosis of BMCs of BALB/c mice via the PTEN/PI3K/Akt signal transduction pathway. *Mol. Med. Rep.* 20: 341-349.
- Kim, I.H., et al. 2020. PYP1-4 peptide from *Pyropia yezoensis* protects against acetaminophen-induced hepatotoxicity in Hep G2 cells. *Exp. Ther. Med.* 19: 849-860.
- Chen, H., et al. 2021. Knockdown SNHG20 suppresses non-small cell lung cancer development by repressing proliferation, migration and invasion, and inducing apoptosis by regulating miR-2467-3p/E2F3. *Cancer Biother. Radiopharm.* 36: 360-370.
- Badea, M.A., et al. 2022. Carboxyl-functionalized carbon nanotubes loaded with cisplatin promote the inhibition of PI3K/Akt pathway and suppress the migration of breast cancer cells. *Pharmaceutics* 14: 469.

RESEARCH USE

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