

PI 3-kinase p110 (D-4): sc-8010

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 (p85 α and p85 β), each possessing one SH3 and two SH2 domains. Various p110 isoforms have been identified. p110 α and p110 β interact with p85 α , and p110 α has also been shown to interact with p85 β *in vitro*. p110 δ expression is restricted to white blood cells. It has been shown to bind p85 α and β , but it apparently does not phosphorylate these subunits. p110 δ seems to have the capacity to autophosphorylate. p110 γ does not interact with the p85 subunits. It has been shown to be activated by α and $\beta\gamma$ heterotrimeric G proteins.

CHROMOSOMAL LOCATION

Genetic locus: PIK3CB (human) mapping to 3q22.3.

SOURCE

PI 3-kinase p110 (D-4) is a mouse monoclonal antibody raised against amino acids 800-1039 of PI 3-kinase p110 of human origin.

PRODUCT

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

PI 3-kinase p110 (D-4) is available conjugated to agarose (sc-8010 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8010 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8010 PE), fluorescein (sc-8010 FITC), Alexa Fluor[®] 488 (sc-8010 AF488), Alexa Fluor[®] 546 (sc-8010 AF546), Alexa Fluor[®] 594 (sc-8010 AF594) or Alexa Fluor[®] 647 (sc-8010 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-8010 AF680) or Alexa Fluor[®] 790 (sc-8010 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PI 3-kinase p110 (D-4) is recommended for detection of PI 3-kinase p110 of human origin by Western Blotting (starting dilution 1:200, 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).

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

Positive Controls: MG-63 whole cell lysate: sc-364784, K-562 whole cell lysate: sc-2203 or C32 whole cell lysate: sc-2205.

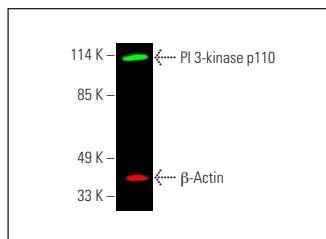
STORAGE

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

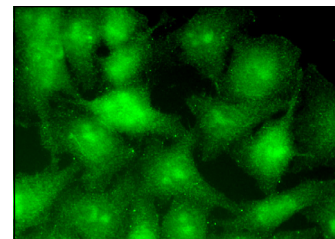
RESEARCH USE

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

DATA



Simultaneous direct near-infrared western blot analysis of PI 3-kinase p110 expression, detected with PI 3-kinase p110 (D-4) Alexa Fluor[®] 680: sc-8010 AF680 and β -Actin expression, detected with β -Actin (C4) Alexa Fluor[®] 790: sc-47778 AF790 in MG-63 whole cell lysate. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



PI 3-kinase p110 (D-4): sc-8010. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

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- Wu, M.H., et al. 2012. Endothelin-1 promotes MMP-13 production and migration in human chondrosarcoma cells through FAK/PI3K/Akt/mTOR pathways. *J. Cell. Physiol.* 227: 3016-3026.
- Huang, C.Y., et al. 2013. Thrombin promotes matrix metalloproteinase-13 expression through the PKC δ c-Src/EGFR/PI3K/Akt/AP-1 signaling pathway in human chondrocytes. *Mediators Inflamm.* 2013: 326041.
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- Brighenti, I., et al. 2016. The Insulin-signaling pathway of the pancreatic islet is impaired in adult mice offspring of mothers fed a high-fat diet. *Nutrition* 32: 1138-1143.
- Ge, S., et al. 2017. Function of miR-152 as a tumor suppressor in human breast cancer by targeting PIK3CA. *Oncol. Res.* 25: 1363-1371.
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- Zhang, M.Y., et al. 2019. Effects of Beclin 1 overexpression on aggressive phenotypes of colon cancer cells. *Oncol. Lett.* 17: 2441-2450.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.