

PI 3-kinase p100 (F-11): sc-365404

BACKGROUND

Phosphatidylinositol 3-kinases (PI3Ks) phosphorylate the 3' OH position of the inositol ring of inositol lipids. PI 3-kinase p100 (phosphoinositide-3-kinase p100 subunit), also known as hVps34 or PIK3C3 (phosphoinositide-3-kinase, class III), is a member of the PI3/PI4-kinase family. It is ubiquitously expressed with predominant expression in skeletal muscle and is believed to participate in endosome to lysosome transport, multivesicular body formation, autophagy and retrograde endosome to Golgi transport. PI 3-kinase p100 is the catalytic subunit of class III PI3Ks and forms a heterodimer with p150, a regulatory subunit of class 3 PI3Ks. PI 3-kinase p100 exclusively phosphorylates phosphatidylinositol to produce PtdIns3P. Unlike class I PI3Ks, whose activities are enhanced in the presence of magnesium, PI 3-kinase p100 activity is enhanced by manganese. Its activity can also be regulated by nutrients, suggesting an important role of PI-3 kinase p100 in the regulation of mTOR protein synthesis and autophagy.

CHROMOSOMAL LOCATION

Genetic locus: PIK3C3 (human) mapping to 18q12.3; Pik3c3 (mouse) mapping to 18 B1.

SOURCE

PI 3-kinase p100 (F-11) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PI 3-kinase p100 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 p100 (F-11) is available conjugated to agarose (sc-365404 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365404 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365404 PE), fluorescein (sc-365404 FITC), Alexa Fluor[®] 488 (sc-365404 AF488), Alexa Fluor[®] 546 (sc-365404 AF546), Alexa Fluor[®] 594 (sc-365404 AF594) or Alexa Fluor[®] 647 (sc-365404 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365404 AF680) or Alexa Fluor[®] 790 (sc-365404 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PI 3-kinase p100 (F-11) is recommended for detection of PI 3-kinase p100 of mouse, rat and 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 p100 siRNA (h): sc-62802, PI 3-kinase p100 siRNA (m): sc-62803, PI 3-kinase p100 shRNA Plasmid (h): sc-62802-SH, PI 3-kinase p100 shRNA Plasmid (m): sc-62803-SH, PI 3-kinase p100 shRNA (h) Lentiviral Particles: sc-62802-V and PI 3-kinase p100 shRNA (m) Lentiviral Particles: sc-62803-V.

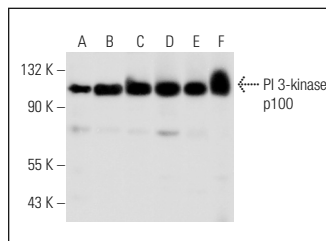
Molecular Weight of PI 3-kinase p100: 102 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

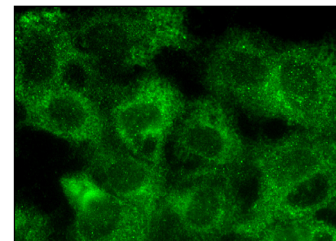
STORAGE

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 p100 (F-11): sc-365404. Western blot analysis of PI 3-kinase p100 expression in Hep G2 (A), HeLa (B), HEK293 (C) and Raji (D) whole cell lysates and mouse brain (E) and human brain (F) tissue extracts.



PI 3-kinase p100 (F-11): sc-365404. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Yan, Y., et al. 2016. Elevated RNA expression of long non-coding HOTAIR promotes cell proliferation and predicts a poor prognosis in patients with diffuse large B cell lymphoma. *Mol. Med. Rep.* 13: 5125-5131.
- Ahmed, M., et al. 2018. Functional linkage of RKIP to the epithelial to mesenchymal transition and autophagy during the development of prostate cancer. *Cancers* 10: 273.
- Losier, T.T., et al. 2019. AMPK promotes xenophagy through priming of autophagic kinases upon detection of bacterial outer membrane vesicles. *Cell Rep.* 26: 2150-2165.e5.
- Mohamud, Y., et al. 2020. Coxsackievirus infection induces a non-canonical autophagy independent of the ULK and PI3K complexes. *Sci. Rep.* 10: 19068.
- Hsu, Y.L., et al. 2021. Peiminine reduces ARTS-mediated degradation of XIAP by modulating the PINK1/Parkin pathway to ameliorate 6-hydroxydopamine toxicity and α -synuclein accumulation in Parkinson's disease models *in vivo* and *in vitro*. *Int. J. Mol. Sci.* 22: 10240.
- Deng, G., et al. 2022. BECN2 (beclin 2) negatively regulates inflammasome sensors through ATG9A-dependent but ATG16L1- and LC3-independent non-canonical autophagy. *Autophagy* 18: 340-356.
- Chen, Z., et al. 2022. δ -Catenin promotes cell migration and invasion via Bcl-2-regulated suppression of autophagy in prostate cancer cells. *Am. J. Cancer Res.* 12: 108-122.
- Zheng, N., et al. 2022. Induction of tumor cell autosis by myxoma virus-infected CAR-T and TCR-T cells to overcome primary and acquired resistance. *Cancer Cell* 40: 973-985.e7.

RESEARCH USE

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA