SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase p110β (H-198): sc-7175

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 (p85α and p85β), each possessing one SH3 and two SH2 domains. Various p110 isoforms have been identified. p110α and p110β interact with p85α, and p110α has also been shown to interact with p85β *in vitro*. p110δ expression is restricted to white blood cells. It has been shown to bind p85α and β, but it apparently does not phosphorylate these subunits. p110δ seems to have the capacity to autophosphorylate. p110γ does not interact with the p85 subunits. It has been shown to be activated by α and βγ heterotrimeric G proteins.

CHROMOSOMAL LOCATION

Genetic locus: PIK3CB (human) mapping to 3q22.3; Pik3cb (mouse) mapping to 9 E3.3.

SOURCE

PI 3-kinase p110β (H-198) is a rabbit polyclonal antibody raised against amino acids 152-350 mapping at the N-terminus of PI 3-kinase p110β of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PI 3-kinase p110β (H-198) is recommended for detection of PI 3-kinase p110β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PI 3-kinase p110β (H-198) is also recommended for detection of PI 3-kinase p110β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PI 3-kinase p110β siRNA (h): sc-37269, PI 3-kinase p110β siRNA (m): sc-29447, PI 3-kinase p110β shRNA Plasmid (h): sc-37269-SH, PI 3-kinase p110β shRNA Plasmid (m): sc-29447-SH, PI 3-kinase p110β shRNA (h) Lentiviral Particles: sc-37269-V and PI 3-kinase p110β shRNA (m) Lentiviral Particles: sc-29447-V.

Molecular Weight of PI 3-kinase p110β: 110 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, C32 whole cell lysate: sc-2205 or HUV-EC-C whole cell lysate: sc-364180.

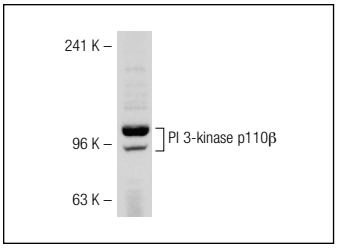
STORAGE

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



PI 3-kinase p110β (H-198): sc-7175. Western blot analysis of PI 3-kinase p110β expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Quignard, J.F., et al. 2001. Phosphoinositide 3-kinase γ mediates angiotensin II-induced stimulation of L-type calcium channels in vascular myocytes. J. Biol. Chem. 276: 32545-32551.
2. Gavete, M.L., et al. 2005. Maternal food restriction enhances Insulin-induced Glut4 translocation and Insulin signaling pathway in skeletal muscle from suckling rats. Endocrinology 146: 3368-3378.
3. Sen, P., et al. 2007. Apoptotic cells induce Mer tyrosine kinase-dependent blockade of NFκB activation in dendritic cells. Blood 109: 653-660.
4. Deane, J.A., et al. 2007. T-cell function is partially maintained in the absence of class IA phosphoinositide 3-kinase signaling. Blood 109: 2894-2902.
5. Yano, N., et al. 2007. A novel signaling pathway for β-adrenergic receptor-mediated activation of phosphoinositide 3-kinase in H9c2 cardiomyocytes. Am. J. Physiol. Heart Circ. Physiol. 293: H385-H393.
6. Zebedin, E., et al. 2008. Leukemic challenge unmasks a requirement for PI 3-Kδ in NK cell-mediated tumor surveillance. Blood 112: 4655-4664.
7. Yang, Y., et al. 2008. Phosphatidylinositol 3-kinase mediates bronchioalveolar stem cell expansion in mouse models of oncogenic K-ras-induced lung cancer. PLoS ONE 3: e2220.
8. Granado-Serrano, A.B., et al. 2008. Time-course regulation of quercetin on cell survival/proliferation pathways in human hepatoma cells. Mol. Nutr. Food Res. 52: 457-464.
9. Granado-Serrano, A.B., et al. 2009. Time-course regulation of survival pathways by epicatechin on HepG2 cells. J. Nutr. Biochem. 20: 115-124.