

PI 3-kinase p85 β (T15): sc-56934

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.

REFERENCES

- Skolnik, E.Y., et al. 1991. Cloning of PI3 kinase-associated p85 utilizing a novel method for expression/cloning of target proteins for receptor tyrosine kinases. *Cell* 65: 83-90.
- Otsu, M., et al. 1991. Characterization of two 85 kDa proteins that associate with receptor tyrosine kinases, middle-T/pp60-Src complexes, and PI3-kinase. *Cell* 65: 91-104.
- Hiles, I.D., et al. 1992. Phosphatidylinositol 3-kinase: structure and expression of the 110 kDa catalytic subunit. *Cell* 70: 419-429.
- Hu, P., et al. 1993. Cloning of a novel, ubiquitously expressed human phosphatidylinositol 3-kinase and identification of its binding site on p85. *Mol. Cell. Biol.* 13: 7677-7688.

CHROMOSOMAL LOCATION

Genetic locus: PIK3R2 (human) mapping to 19p13.11; Pik3r2 (mouse) mapping to 8 B3.3.

SOURCE

PI 3-kinase p85 β (T15) is a mouse monoclonal antibody raised against PI 3-kinase p85 β of bovine origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

PROTOCOLS

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

APPLICATIONS

PI 3-kinase p85 β (T15) is recommended for detection of PI 3-kinase p85 β of mouse, rat and 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with the p85 α subunit.

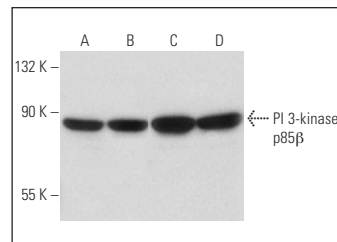
PI 3-kinase p85 β (T15) is also recommended for detection of PI 3-kinase p85 β in additional species, including bovine.

Suitable for use as control antibody for PI 3-kinase p85 β siRNA (h): sc-39125, PI 3-kinase p85 β siRNA (m): sc-39126, PI 3-kinase p85 β shRNA Plasmid (h): sc-39125-SH, PI 3-kinase p85 β shRNA Plasmid (m): sc-39126-SH, PI 3-kinase p85 β shRNA (h) Lentiviral Particles: sc-39125-V and PI 3-kinase p85 β shRNA (m) Lentiviral Particles: sc-39126-V.

Molecular Weight of PI 3-kinase p85 β : 85 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, SW480 cell lysate: sc-2219 or HeLa whole cell lysate: sc-2200.

DATA



PI 3-kinase p85 β (T15): sc-56934. Western blot analysis of PI 3-kinase p85 β expression in COLO 320DM (A), SW480 (B), HeLa (C) and U-87 MG (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Shin, Y.K., et al. 2007. SH3 binding motif 1 in influenza A virus NS1 protein is essential for PI3K/Akt signaling pathway activation. *J. Virol.* 81: 12730-12739.
- Tiwari, S., et al. 2009. Targeting of the GTPase Irgm1 to the phagosomal membrane via PtdIns(3,4)P(2) and PtdIns(3,4,5)P(3) promotes immunity to mycobacteria. *Nat. Immunol.* 10: 907-917.
- He, J., et al. 2010. The p85 β regulatory subunit of PI3K serves as a substrate for PTEN protein phosphatase activity during Insulin mediated signaling. *Biochem. Biophys. Res. Commun.* 397: 513-519.



See **PI 3-kinase p85 α / β / γ (D-9): sc-374534** for PI 3-kinase p85 α / β / γ antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.