

PI 3-kinase p85 α (3H2838): sc-71892

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 PI 3-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 kd proteins that associate with receptor tyrosine kinases, middle-T/pp60^{c-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.
- Stoyanov, B., et al. 1995. Cloning and characterization of a G protein-activated human phosphoinositide 3-kinase. *Science* 269: 690-693.
- Vanhaesebroeck, B., et al. 1997. P110 δ , a novel phosphoinositide 3-kinase in leukocytes. *Proc. Natl. Acad. Sci. USA* 94: 4330-4335.

CHROMOSOMAL LOCATION

Genetic locus: PIK3R1 (human) mapping to 5q13.1; Pik3r1 (mouse) mapping to 13 D1.

SOURCE

PI 3-kinase p85 α (3H2838) is a mouse monoclonal antibody raised against recombinant PI 3-kinase p85 α of bovine origin.

PRODUCT

Each vial contains 1 ml culture supernatant containing IgG₁ with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

PI 3-kinase p85 α (3H2838) is recommended for detection of the SH3 domain of PI 3-kinase p85 α of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)]; non cross-reactive with the p85 β isoform.

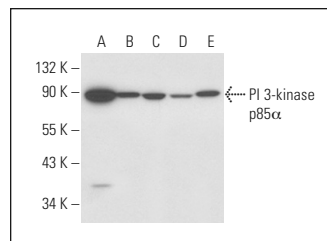
PI 3-kinase p85 α (3H2838) is also recommended for detection of the SH3 domain of PI 3-kinase p85 α in additional species, including bovine.

Suitable for use as control antibody for PI 3-kinase p85 α siRNA (h): sc-36217, PI 3-kinase p85 α siRNA (m): sc-36218, PI 3-kinase p85 α siRNA (r): sc-156021, PI 3-kinase p85 α shRNA Plasmid (h): sc-36217-SH, PI 3-kinase p85 α shRNA Plasmid (m): sc-36218-SH, PI 3-kinase p85 α shRNA Plasmid (r): sc-156021-SH, PI 3-kinase p85 α shRNA (h) Lentiviral Particles: sc-36217-V, PI 3-kinase p85 α shRNA (m) Lentiviral Particles: sc-36218-V and PI 3-kinase p85 α shRNA (r) Lentiviral Particles: sc-156021-V.

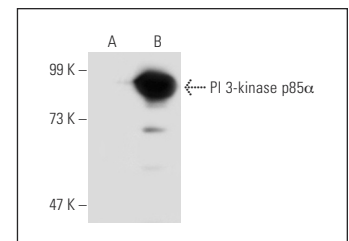
Molecular Weight of PI 3-kinase p85 α : 85 kDa.

Positive Controls: PI 3-kinase p85 α (m): 293T Lysate: sc-122557, Caki-1 cell lysate: sc-2224 or COLO 320DM cell lysate: sc-2226.

DATA



PI 3-kinase p85 α (3H2838): sc-71892. Western blot analysis of PI 3-kinase p85 α expression in U-937 (A), Caki-1 (B), COLO 320DM (C), SW480 (D) and NIH/3T3 (E) whole cell lysates.



PI 3-kinase p85 α (3H2838): sc-71892. Western blot analysis of PI 3-kinase p85 α expression in non-transfected: sc-117752 (A) and mouse PI 3-kinase p85 α transfected: sc-122557 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- 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.
- Kalpana, K., et al. 2018. Supplementation of scopoletin improves Insulin sensitivity by attenuating the derangements of Insulin signaling through AMPK. *Mol. Cell. Biochem.* 453: 65-78.
- Yang, Y., et al. 2018. Tormentric acid inhibits IL-1 β -induced chondrocyte apoptosis by activating the PI3K/Akt signaling pathway. *Mol. Med. Rep.* 17: 4753-4758.

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.