

p-PI 3-kinase p110 δ (Tyr 485): sc-130211

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 kDa proteins that associate with receptor tyrosine kinases, middle-T/pp60Src complexes and PI 3-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.
- Vanhaesebrock, 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: PIK3CD (human) mapping to 1p36.22.

SOURCE

p-PI 3-kinase p110 δ (Tyr 485) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 485 phosphorylated PI 3-kinase p110 δ of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4 $^{\circ}$ 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.

APPLICATIONS

p-PI 3-kinase p110 δ (Tyr 485) is recommended for detection of Tyr 485 phosphorylated PI 3-kinase p110 δ 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PI 3-kinase p110 δ siRNA (h): sc-39131, PI 3-kinase p110 δ shRNA Plasmid (h): sc-39131-SH and PI 3-kinase p110 δ shRNA (h) Lentiviral Particles: sc-39131-V.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

SELECT PRODUCT CITATIONS

- Yang, W.H., et al. 2013. Leptin induces IL-6 expression through OBRI receptor signaling pathway in human synovial fibroblasts. *PLoS ONE* 8: e75551.
- 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.

PROTOCOLS

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