PI 3-kinase p101 (I-18): sc-130230



The Power to Question

BACKGROUND

Pl 3-kinase p101 is an 880 amino acid protein that acts as a regulatory subunit of the Pl3 kinase complex. Pl 3-kinase p101 interacts with Pl 3-kinase p110 to form the Pl3 kinase complex, which is activated by G β proteins and plays a role in many physiological processes, such as cardiac function, neutrophil chemotaxis and mast cell degranulation. Specifically, the Pl3 kinase complex is involved in suppression of apoptosis, cellular transport and cell motility. Binding of the Pl 3-kinase p110 subunit to Pl 3-kinase p101 is dependent on the N-terminal region of Pl 3-kinase p101. With highest expression in leukocytes, spleen lymph node thymus and bone marrow, Pl 3-kinase p101 is subcellularly located in the nucleus, cytoplasm, or it can exist as a peripheral membrane protein. There are two isoforms of Pl 3-kinase p101 that are produced as a result of alternative splicing.

REFERENCES

- 1. Franke, T.F., et al. 1997. PI3K: downstream AKTion blocks apoptosis. Cell 88: 435-437.
- 2. Stephens, L.R., et al. 1997. The Gβγ sensitivity of a Pl3K is dependent upon a tightly associated adaptor, p101. Cell 89: 105-114.
- Toker, A. and Cantley, L.C. 1997. Signalling through the lipid products of phosphoinositide-3-OH kinase. Nature 387: 673-676.
- 4. Krugmann, S., et al. 1999. Characterizing the interactions between the two subunits of the p101/p110 γ phosphoinositide 3-kinase and their role in the activation of this enzyme by G $\beta\gamma$ subunits. J. Biol. Chem. 274: 17152-17158.
- Stephens, L., et al. 2002. Roles of PI3Ks in leukocyte chemotaxis and phagocytosis. Curr. Opin. Cell Biol. 14: 203-213.
- 6. Brock, C., et al. 2003. Roles of G $\beta\gamma$ in membrane recruitment and activation of p110 γ /p101 phosphoinositide 3-kinase γ . J. Cell Biol. 160: 89-99.
- 7. Kerchner, K.R., et al. 2004. Differential sensitivity of phosphatidylinositol 3-kinase p110 γ to isoforms of G protein $\beta\gamma$ dimers. J. Biol. Chem. 279: 44554-44562.
- 8. Voigt, P., et al. 2005. Assigning functional domains within the p101 regulatory subunit of phosphoinositide 3-kinase γ. J. Biol. Chem. 280: 5121-5127.
- 9. Suire, S., et al. 2005. p84, a new Gβγ-activated regulatory subunit of the type IB phosphoinositide 3-kinase p110γ. Curr. Biol. 15: 566-570.

CHROMOSOMAL LOCATION

Genetic locus: PIK3R5 (human) mapping to 17p13.1.

SOURCE

PI 3-kinase p101 (I-18) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of PI 3-kinase p101 of human origin.

PRODUCT

Each vial contains 100 μg lgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PI 3-kinase p101 (I-18) is recommended for detection of PI 3-kinase p101 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 p101 siRNA (h): sc-94221, PI 3-kinase p101 shRNA Plasmid (h): sc-94221-SH and PI 3-kinase p101 shRNA (h) Lentiviral Particles: sc-94221-V.

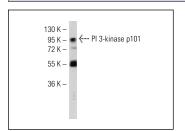
Molecular Weight of PI 3-kinase p101: 101 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

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 A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PI 3-kinase p101 (I-18): sc-130230. Western blot analysis of PI 3-kinase p101 expression in K-562 whole cell lysate.

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.



Try **PI 3-kinase p101 (E-12): sc-390916**, our highly recommended monoclonal alternative to PI 3-kinase p101 (I-18).

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