

PI 3-kinase p85 α / β /p55 γ (H-274): sc-292114

BACKGROUND

Phosphatidylinositol 3-kinase (PI 3-kinase) phosphorylates the 3' OH position of the inositol ring of inositol lipids and is composed of p85 and p110 subunits. PI 3-kinase p85 lacks PI 3-kinase activity and acts as an adapter, coupling p110 to activated protein tyrosine kinase. Both PI 3-kinase p85 α and PI 3-kinase p85 β possess one SH3 and two SH2 domains. PI 3-kinase p85 α , also known as GRB1, phosphatidylinositol 3-kinase regulatory 1 or p85, is a 724 amino acid protein that exists as 4 alternatively spliced isoforms. Involved in Insulin metabolism, defects in the PI 3-kinase p85 α gene have been linked to Insulin resistance. PI 3-kinase p85 α is polyubiquitinated in T cells by Cbl- β , and has multiple phosphorylated amino acid residues, including a phosphorylated tyrosine residue at position 467. PI 3-kinase p85 γ contains 1,102 amino acids and is encoded by a gene that maps to human chromosome 7.

REFERENCES

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- Craparo, A., et al. 1995. Non-SH2 domains within Insulin receptor substrate-1 and SHC mediate their phosphotyrosine-dependent interaction with the NPEY motif of the Insulin-like growth factor I receptor. *J. Biol. Chem.* 270: 15639-15643.
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- Antonetti, D.A., et al. 1996. Insulin receptor substrate 1 binds two novel splice variants of the regulatory subunit of phosphatidylinositol 3-kinase in muscle and brain. *Mol. Cell. Biol.* 16: 2195-2203.
- Musacchio, A., et al. 1996. Crystal structure of the breakpoint cluster region-homology domain from phosphoinositide 3-kinase p85 α subunit. *Proc. Natl. Acad. Sci. USA* 93: 14373-14378.
- Baynes, K.C., et al. 2000. Natural variants of human p85 α phosphoinositide 3-kinase in severe Insulin resistance: a novel variant with impaired Insulin-stimulated lipid kinase activity. *Diabetologia* 43: 321-331.
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SOURCE

PI 3-kinase p85 α / β /p55 γ (H-274) is a rabbit polyclonal antibody raised against amino acids 323-596 mapping within an internal region of PI 3-kinase p85 β of human origin.

PRODUCT

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

APPLICATIONS

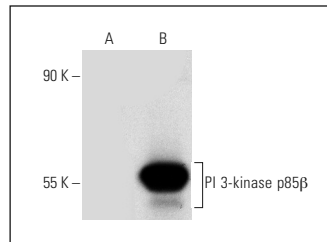
PI 3-kinase p85 α / β /p55 γ (H-274) is recommended for detection of PI 3-kinase p85 α , PI 3-kinase p85 β and PI 3-kinase p55 γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 p85 α / β /p55 γ (H-274) is also recommended for detection of PI 3-kinase p85 α , PI 3-kinase p85 β and PI 3-kinase p55 γ in additional species, including canine, bovine, porcine and avian.

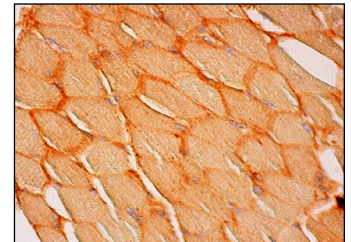
Molecular Weight of PI 3-kinase p85 α / β /p55 γ isoforms: 84/53/50/84 kDa.

Positive Controls: PI 3-kinase p85 β (h): 293T Lysate: sc-112567.

DATA



PI 3-kinase p85 α / β /p55 γ (H-274): sc-292114. Western blot analysis of PI 3-kinase p85 β expression in non-transfected: sc-117752 (A) and human PI 3-kinase p85 β transfected: sc-112567 (B) 293T whole cell lysates.



PI 3-kinase p85 α / β /p55 γ (H-274): sc-292114. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic and membrane staining of myocytes.

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 or our catalog for detailed protocols and support products.



Try **PI 3-kinase p85 α / β /p55 γ (D-9): sc-374534**, our highly recommended monoclonal alternative to PI 3-kinase p85 α / β /p55 γ (H-274). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PI 3-kinase p85 α / β /p55 γ (D-9): sc-374534**.