

Akt3 (M-14): sc-11521

BACKGROUND

The serine/threonine kinase Akt family contains several members, including Akt1 (also designated PKB or RacPK), Akt2 (also designated PKB β or RacPK- β) and Akt 3 (also designated PKB γ or thymoma viral proto-oncogene 3), which exhibit sequence homology with the protein kinase A and C families and are encoded by the c-Akt proto-oncogene. All members of the Akt family have a Pleckstrin homology domain. Akt3 is phosphorylated on a serine residue in response to Insulin. However, the activation of Akt3 by Insulin is inhibited by prior activation of protein kinase C via a mechanism that does not require the presence of the PH domain. Akt3 is expressed in 3T3-L1 fibroblasts, adipocytes and skeletal muscle and may be involved in various biological processes, including adipocyte and muscle differentiation, glycogen synthesis, glucose uptake, apoptosis and cellular proliferation.

REFERENCES

1. Burgering, B.M., et al. 1995. Protein kinase B (c-Akt) in phosphatidylinositol-3-OH kinase signal transduction. *Nature* 376: 599-602.
2. Datta, K., et al. 1995. AH/PH domain-mediated interaction between Akt molecules and its potential role in Akt regulation. *Mol. Cell. Biol.* 15: 2304-2310.

CHROMOSOMAL LOCATION

Genetic locus: AKT3 (human) mapping to 1q43; Akt3 (mouse) mapping to 1 H4.

SOURCE

Akt3 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Akt3 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-11521 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Akt3 (M-14) is recommended for detection of Akt3 of mouse, rat and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Akt3 siRNA (h): sc-38911, Akt3 siRNA (m): sc-38912, Akt3 shRNA Plasmid (h): sc-38911-SH, Akt3 shRNA Plasmid (m): sc-38912-SH, Akt3 shRNA (h) Lentiviral Particles: sc-38911-V and Akt3 shRNA (m) Lentiviral Particles: sc-38912-V.

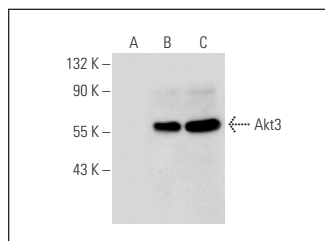
Molecular Weight of Akt3: 60 kDa.

Positive Controls: Akt3 (h2): 293T Lysate: sc-127955, NIH/3T3 whole cell lysate: sc-2210 or mouse brain extract: sc-2253.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Akt3 (M-14): sc-11521. Western blot analysis of Akt3 expression in non-transfected: sc-117752 (A) and human Akt3 transfected: sc-127955 (B) 293T whole cell lysates and mouse brain tissue extract (C).

SELECT PRODUCT CITATIONS

1. Murata, H., et al. 2003. Reconstitution of phosphoinositide 3-kinase-dependent Insulin signaling in a cell-free system. *J. Biol. Chem.* 278: 21607-21614.
2. Tang, M.K., et al. 2006. Comparative proteomic analysis reveals a function of the novel death receptor-associated protein BRE in the regulation of prohibitin and p53 expression and proliferation. *Proteomics* 6: 2376-2385.
3. Park, D.J., et al. 2007. Akt phosphorylates connexin 43 on Ser 373, a "mode-1" binding site for 14-3-3. *Cell Commun. Adhes.* 14: 211-226.
4. Chen, H.B., et al. 2008. Comparative proteomic analysis reveals differentially expressed proteins regulated by a potential tumor promoter, BRE, in human esophageal carcinoma cells. *Biochem. Cell Biol.* 86: 302-311.
5. Santi, S.A., et al. 2010. The Akt isoforms are present at distinct subcellular locations. *Am. J. Physiol., Cell Physiol.* 298: C580-C591.

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.

MONOS
Satisfaction
Guaranteed

Try **Akt3 (EE-M14): sc-134254**, our highly recommended monoclonal alternative to Akt3 (M-14).