

Akt3 (4H23): sc-70338

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

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- Nakatani, K., et al. 1999. Identification of a human Akt3 (protein kinase B γ) which contains the regulatory serine phosphorylation site. *Biochem. Biophys. Res. Commun.* 257: 906-910.
- Turinsky, J., et al. 1999. Akt kinases and 2-deoxyglucose uptake in rat skeletal muscles *in vivo*: study with Insulin and exercise. *Am. J. Physiol.* 276: R277-282.
- Murthy, S.S., et al. 2000. Mapping of AKT3, encoding a member of the Akt/protein kinase B family, to human and rodent chromosomes by fluorescence *in situ* hybridization. *Cytogenet. Cell Genet.* 88: 38-40.

CHROMOSOMAL LOCATION

Genetic locus: AKT3 (human) mapping to 1q43-q44; Akt3 (mouse) mapping to 1 H4-H6.

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.

SOURCE

Akt3 (4H23) is a mouse monoclonal antibody raised against amino acids 119-136 of Akt3 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Akt3 (4H23) is recommended for detection of Akt3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for Akt3 siRNA (h): sc-38911 and Akt3 siRNA (m): sc-38912.

Molecular Weight of Akt3: 56 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, mouse brain extract: sc-2253 or 3T3-L1 cell lysate: sc-2243.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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.

SELECT PRODUCT CITATIONS

- Moro, L., et al. 2009. Mitochondrial DNA depletion in prostate epithelial cells promotes anoikis resistance and invasion through activation of PI3K/Akt2. *Cell Death Differ.* 16: 571-583.

PROTOCOLS

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