

Akt3 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1061a**Specification**

Akt3 Antibody - Product Information

Application	WB, IHC
Primary Accession	O9Y243
Reactivity	Human
Host	Mouse
Clonality	Monoclonal

Description

Akt3 (also designated protein kinase B gamma or v-akt murine thymoma viral oncogene homolog 3) with 479-amino acid protein (about 53kDa), belongs to the AKT serine/threonine protein kinase family, which also includes Akt1 and Akt2. AKT kinases are known to be regulators of cell signaling in response to insulin and growth factors. They are involved in a wide variety of biological processes including cell proliferation, differentiation, apoptosis, tumorigenesis, as well as glycogen synthesis and glucose uptake. Akt3 is not required for the maintenance of normal carbohydrate metabolism but is essential for the attainment of normal organ size. Identifying Akt3 as a selective target in melanoma cells also provides new therapeutic opportunities for patients in the advanced stages of this disease.

Immunogen

Purified recombinant fragment of Akt3 expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

Akt3 Antibody - Additional Information

Gene ID 10000

Other Names

RAC-gamma serine/threonine-protein kinase, 2.7.11.1, Protein kinase Akt-3, Protein kinase B gamma, PKB gamma, RAC-PK-gamma, STK-2, AKT3, PKBG

Dilution

WB~~1/500 - 1/2000

IHC~~1:200~~1000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Akt3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Akt3 Antibody - Protein Information

Name AKT3

Synonyms PKBG

Function

AKT3 is one of 3 closely related serine/threonine-protein kinases (AKT1, AKT2 and AKT3) called the AKT kinase, and which regulate many processes including metabolism, proliferation, cell survival, growth and angiogenesis. This is mediated through serine and/or threonine phosphorylation of a range of downstream substrates. Over 100 substrate candidates have been reported so far, but for most of them, no isoform specificity has been reported. AKT3 is the least studied AKT isoform. It plays an important role in brain development and is crucial for the viability of malignant glioma cells. AKT3 isoform may also be the key molecule in up-regulation and down-regulation of MMP13 via IL13. Required for the coordination of mitochondrial biogenesis with growth factor-induced increases in cellular energy demands. Down-regulation by RNA interference reduces the expression of the phosphorylated form of BAD, resulting in the induction of caspase- dependent apoptosis.

Cellular Location

Nucleus. Cytoplasm. Membrane; Peripheral membrane protein Note=Membrane-associated after cell stimulation leading to its translocation

Tissue Location

In adult tissues, it is highly expressed in brain, lung and kidney, but weakly in heart, testis and liver. In fetal tissues, it is highly expressed in heart, liver and brain and not at all in kidney

Akt3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Akt3 Antibody - Images

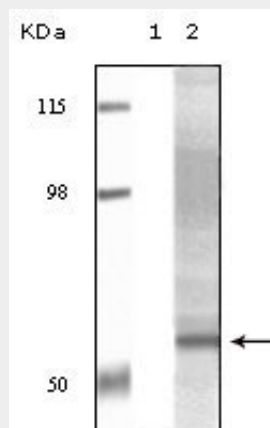


Figure 1: Western blot analysis using Akt3 mouse mAb against truncated Akt3 recombinant protein (1) and human ovary carcinoma tissue lysate (2).

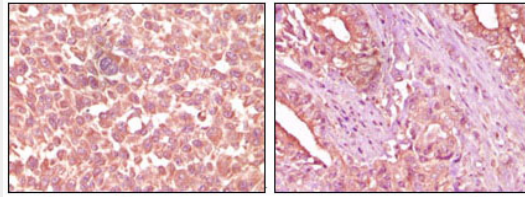


Figure 2: Immunohistochemical analysis of paraffin-embedded human skin carcinoma (left) and pancreas carcinoma (right) tissue, showing cytoplasmic localization using EphA2 mouse mAb with DAB staining.

Akt3 Antibody - References

1. Rachael M. Easton, Han Cho, Kristin Roovers. *Mol. Cell. Biol.*, Mar 2005; 25: 1869 - 1878
2. Jill M. Stahl, Arati Sharma, Mitchell Cheung. *Cancer Res.*, Oct 2004; 64: 7002-7010