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Akt3 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1061a

Product Information

Application	WB, E
Primary Accession	Q9Y243
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3B12F3F10; 2D2B11B11; 2D2B11H5
Calculated MW	55775
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.

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 E~~N/A
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.

Protein Information

AKT3

Name	
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

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

Images

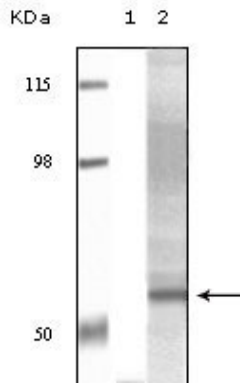


Figure 1: Western blot analysis using Akt3 mouse mAb against truncated Akt3 recombinant protein (1) and human ovary carcinoma tissue lysate (2).

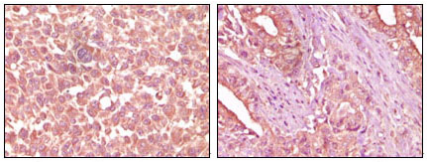


Figure 2: Immunohistochemical analysis of paraffin-embedded human skin carcinoma (left) and pancreas carcinoma (right) tissue, showing cytoplasmic localization using EphA2 mouse mAb with DAB staining.

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