

**Anti-AKT3 Antibody**  
**Catalog # ABO11508****Specification**

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**Anti-AKT3 Antibody - Product Information**

Application	WB, IHC, ICC
Primary Accession	<a href="#">Q9Y243</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for RAC-gamma serine/threonine-protein kinase(AKT3) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-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

**Calculated MW**

55775 MW KDa

**Application Details**

Immunocytochemistry , 0.5-1 µg/ml, Mouse, Human,  
Rat<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By  
Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

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

**Tissue Specificity**

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.

**Protein Name**

RAC-gamma serine/threonine-protein kinase

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human AKT3(122-136aa TSQIDNIGEEEMDAS), identical to the related mouse and rat sequences.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. RAC subfamily.

**Anti-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

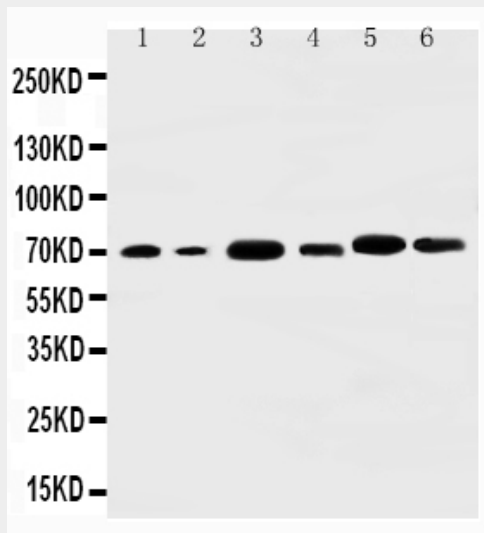
**Anti-AKT3 Antibody - Protocols**

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

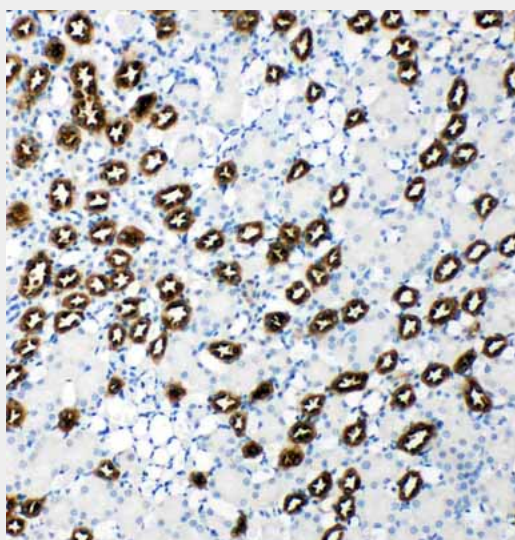
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)

- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

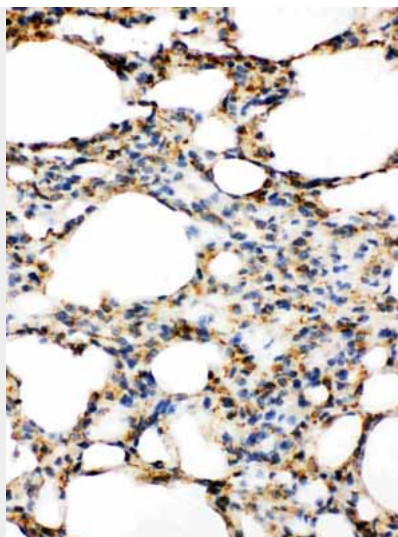
#### Anti-AKT3 Antibody - Images



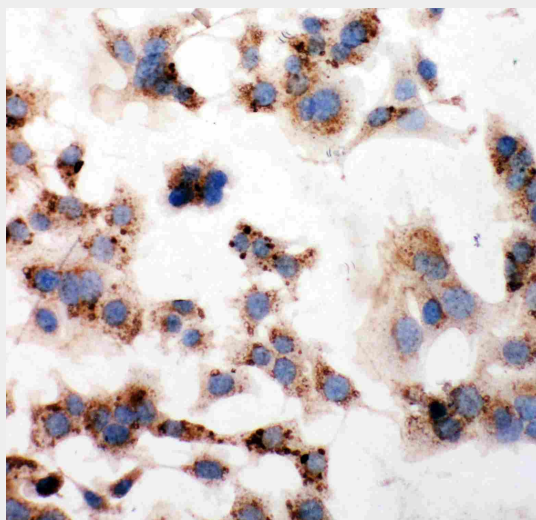
Anti-AKT3 antibody, ABO11508, Western blotting  
Lane 1: Rat Lung Tissue Lysate  
Lane 2: Rat Kidney Tissue Lysate  
Lane 3: HELA Cell Lysate  
Lane 4: Human Placenta Tissue Lysate  
Lane 5: A549 Cell Lysate  
Lane 6: NIH3T3 Cell Lysate



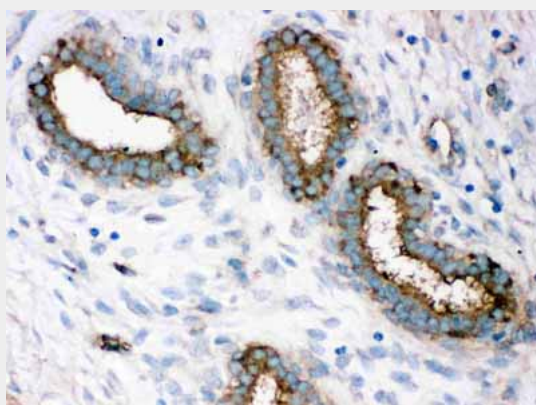
Anti-AKT3 antibody, ABO11508, IHC(P)  
IHC(P): Rat Kidney Tissue



Anti-AKT3 antibody, ABO11508, IHC(P)IHC(P): Rat Lung Tissue



Anti-AKT3 antibody, ABO11508, ICCICC: HEPA Cell



Anti-AKT3 antibody, ABO11508, IHC(P)IHC(P): Human Mammary Cancer Tissue

#### **Anti-AKT3 Antibody - Background**

RAC-gamma serine/threonine-protein kinase, also known as protein kinase Akt-3, is an enzyme that in humans is encoded by the AKT3 gene. This gene is mapped to 1q43-q44. The protein encoded by this gene is a member of the AKT, also called PKB, serine/threonine protein kinase family. 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. This kinase has been shown to be stimulated by platelet-derived growth factor(PDGF), insulin, and insulin-like growth factor 1(IGF1). AKT3 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. This gene is required for the coordination of mitochondrial biogenesis with growth factor-induced increases in cellular energy demands.