

**Goat Anti-AKT3 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1049a****Specification**

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**Goat Anti-AKT3 Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">O9Y243</a>
Other Accession	<a href="#">NP_859029</a> , <a href="#">10000</a>
Reactivity	Human, Mouse, Rat
Predicted	Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	55775

**Goat 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

**Dilution**

WB~~1:1000

E~~N/A

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**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**

Goat Anti-AKT3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat 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

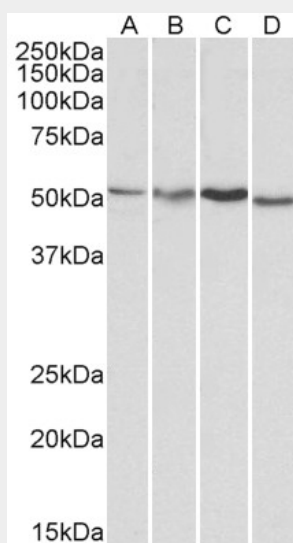
In adult tissues, it is highly expressed in brain, lung and kidney, but weakly in heart, testis and liver. In fetal tissues, it is highly expressed in heart, liver and brain and not at all in kidney

## Goat Anti-AKT3 Antibody - Protocols

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

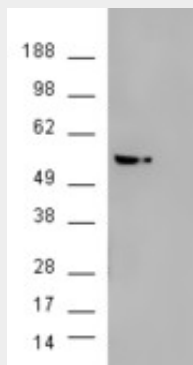
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Goat Anti-AKT3 Antibody - Images



AF1049a (1 µg/ml) staining of HepG2 (A), Jurkat (B), Mouse Brain (C) and Rat Brain (D) lysates (35

µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



HEK293 overexpressing AKT3 (RC224750) and probed with AF1049a (mock transfection in second lane), tested by Origene.

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

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). Alternatively splice transcript variants encoding distinct isoforms have been described.

### **Goat Anti-AKT3 Antibody - References**

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.

Key signalling nodes in mammary gland development and cancer. Signalling downstream of PI3 kinase in mammary epithelium: a play in 3 Akts. Wickenden JA, et al. Breast Cancer Res, 2010. PMID 20398329.

Energy balance, the PI3K-AKT-mTOR pathway genes, and the risk of bladder cancer. Lin J, et al. Cancer Prev Res (Phila), 2010 Apr. PMID 20354165.

Mutational and immunohistochemical study of the PI3K/Akt pathway in papillary thyroid carcinoma in Greece. Sozopoulos E, et al. Endocr Pathol, 2010 Jun. PMID 20186503.

Akt2 and Akt3 play a pivotal role in malignant gliomas. Mure H, et al. Neuro Oncol, 2010 Mar. PMID 20167810.