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Datasheet for ABIN1043774

# anti-AKT2 antibody (Internal Region)





Publication



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Quantity:	100 μg	
Target:	AKT2	
Binding Specificity:	Internal Region	
Reactivity:	Human	
Host:	Rat	
Clonality:	Monoclonal	
Conjugate:	This AKT2 antibody is un-conjugated	
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)	
Product Details		
Immunogen:	Anti-AKT2 Antibody was produced by repeated immunizations with a synthetic peptide	
	corresponding to internal residues of human AKT2 protein.	
	Immunogen Type: Peptide	
Clone:	16G11-A7	
Isotype:	IgG2a kappa	
Specificity:	Anti-AKT2 antibody is directed against human AKT2. The antibody detects both	
	unphosphorylated and phosphorylated forms of the protein. Anti-AKT2 was purified from	
	ascites by Protein A chromatography. Cross reactivity with AKT2 from other species has not	
	been determined, however, the sequence of the immunogen shows 88% identity to mouse and	
	90% identity with rat, therefore, cross reactivity is expected.	
Characteristics:	AKT2 Antibody detects AKT2 which is a component of the PI-3 kinase pathway and is activated	

by phosphorylation at Ser 473 and Thr 308. AKT is a cytoplasmic protein also known as Protein Kinase B (PKB) and rac (related to A and C kinases). AKT is a key regulator of many signal transduction pathways. AKT Exhibits tight control over cell proliferation and cell viability. Overexpression or inappropriate activation of AKT is noted in many types of cancer. AKT mediates many of the downstream events of PI 3-kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI 3-kinase recruits AKT to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT has two main roles: (i) inhibition of apoptosis, (ii) promotion of proliferation. Anti-AKT2 Antibody is ideal for investigators involved in Cell Signaling, Neuroscience, Signal Transduction research.

Sterility:

Sterile filtered

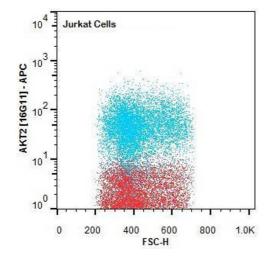
# **Target Details**

l arget Details				
Target:	AKT2			
Alternative Name:	AKT2 (AKT2 Products)			
Background:	AKT2 Antibody detects AKT2 which is a component of the PI-3 kinase pathway and is activated			
	by phosphorylation at Ser 473 and Thr 308. AKT is a cytoplasmic protein also known as Protein			
	Kinase B (PKB) and rac (related to A and C kinases). AKT is a key regulator of many signal			
	transduction pathways. AKT Exhibits tight control over cell proliferation and cell viability.			
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	inhibition of apoptosis; (ii) promotion of proliferation. Anti-AKT2 Antibody is ideal for			
	investigators involved in Cell Signaling, Neuroscience, Signal Transduction research.			
	Synonyms: AKT 2 antibody, AKT-2, PKB antibody, PKB beta antibody, PKBBETA antibody,			
	PRKBB antibody, Protein kinase Akt 2 antibody, Protein kinase B beta antibody, RAC-beta			
	serine/threonine-protein kinase, RAC-PK-beta			
Gene ID:	208			
UniProt:	P31751			
Pathways:	PI3K-Akt Signaling, RTK Signaling, AMPK Signaling, TLR Signaling, Cellular Glucan Metabolic			
	Process, Regulation of Carbohydrate Metabolic Process, Hepatitis C, VEGF Signaling			

# **Application Details**

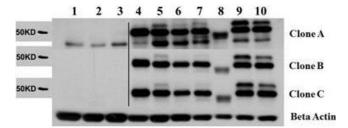
Application Notes:	Anti-AKT2 Antibody is suitable for ELISA, immunohistochemistry, and western blotting. Expect a
	band approximately 56 kDa in size corresponding to AKT2 protein by western blotting in the
	appropriate cell lysate or extract. This monoclonal antibody reacts with human AKT. Specific
	conditions for reactivity should be optimized by the end user. For immunohistochemistry we
	recommend the use of fresh frozen tissues. Attempts at staining paraffin-embedded formalin
	fixed tissues were negative. No pre-treatment of sample is required.
Comment:	Gene Name: AKT2
Restrictions:	For Research Use only
Handling	
Format:	Liquid
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which
	should be handled by trained staff only.
Storage:	4 °C/-20 °C
Storage Comment:	Store vial at 4 °C prior to restoration. For extended storage aliquot contents and freeze at -20 °C
	or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after
	standing at room temperature. This product is stable for several weeks at 4 °C as an undiluted
	liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening.
Expiry Date:	12 months
Publications	
Product cited in:	Hall, Cowan: "Structural features and restricted expression of a human alpha-tubulin gene." in:
	Nucleic acide recognite \( \langle \) \( \la

Nucleic acids research, Vol. 13, Issue 1, pp. 207-23, (1985) (PubMed).



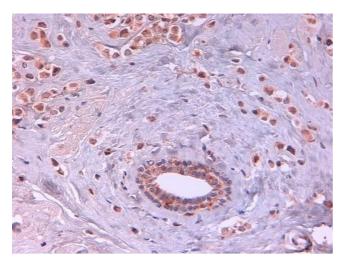
## **Flow Cytometry**

**Image 1.** Flow Cytometry of Rat anti-AKT2 antibody. Cells: Jurkat Cells. Stimulation: none. Primary antibody: Allophycocyanin AKT2 antibody at 1.0  $\mu$ g/mL for 20 min at 4°C.



# **Western Blotting**

Image 2. Western Blot of Rat Anti-AKT2 antibody. Lane 1: C2C12. Lane 2: MEF#1. Lane 3: MEF#2. Lane 4: A549. Lane 5: Calu-1. Lane 6: PC3. Lane 7: HepG2. Lane 8: Jurkat. Lane 9: SKOV3. Lane 10: 293T. Load: 35 μg per lane. Primary antibody: AKT-2 antibody at 1:1000 for overnight at 4°C. Secondary antibody: Rat secondary antibody at 1:20,000 for 1 h at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 56 kDa for AKT2.



## **Immunohistochemistry**

**Image 3.** Immunohistochemistry of Rat monoclonal anti AKT2 Antibody in human breast carcinoma. Tissue: Human Breast Cancer. Fixation: FFPE buffered formalin 10% conc. Ag Retrieval: Heat, Citrate pH 6.2. Pressure Cooker. antibody: 2ug/ml 1.5 hour @ room T. Secondary Ab: mouse anti rat 1:50 45" RT.

Please check the product details page for more images. Overall 4 images are available for ABIN1043774.