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Datasheet for 200-501-E71S

AKT2 Antibody

Overview

Description:	Anti-AKT2 (RAT) Monoclonal Antibody - 200-501-E71S
Item No.:	200-501-E71S
Size:	25 µL
Applications:	ELISA, IHC, WB
Reactivity:	Human
Host Species:	Rat

Product Details

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. 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.
Synonyms:	rat anti-Anti-AKT2 antibody, 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
Host Species:	Rat
Clonality:	Monoclonal
Clone ID:	16G11.E8
Format:	IgG2a

Target Details

Gene Name:	AKT2

Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-AKT2 Antibody was produced by repeated immunizations with a synthetic peptide corresponding to internal residues of human AKT2 protein.
Purity/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 concentrated tissue culture supernate 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.
Relevant Links:	• GeneID - 208 • NCBI - NP_001317440.1 • UniProtKB - P31751

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	Anti-AKT2 Antibody is tested 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
FC:	User Optimized
IHC:	20 µg/mL
WB:	1:500- 1:2000

Formulation

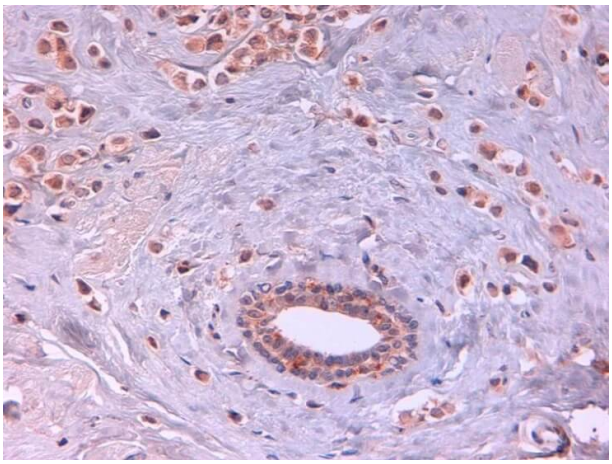
Physical State:	Liquid (sterile filtered)
Concentration:	1mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer:	None

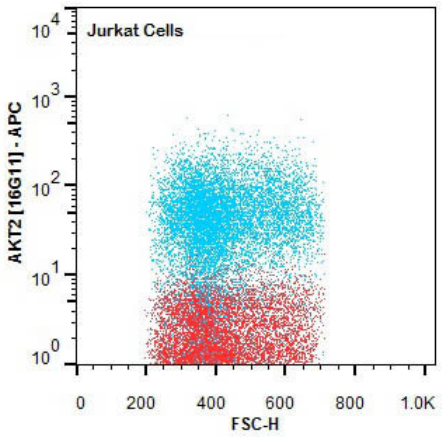
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

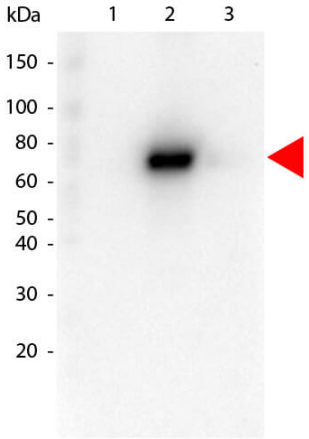
Images



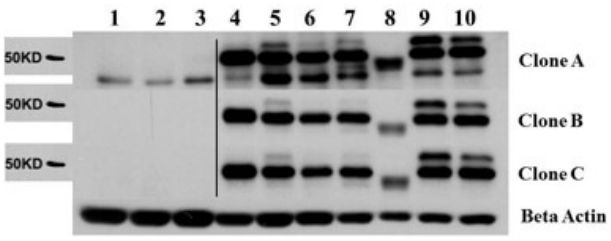
Immunohistochemistry
Immunohistochemistry of Rat monoclonal anti AKT2 Antibody in human breast carcinoma. Tissue: Human Breast Cancer. Fixation: FFPE buffered formalin 10% conc. Ag Retrieval: Heat, Citrate pH 6.2. Pressure Cooker. antibody: anti-AKT2 at 2ug/ml for 1.5 hour @ room temp. Secondary Ab: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



Flow Cytometry
Flow Cytometry of Rat anti-AKT2 Allophycocyanin antibody. Cells: Jurkat Cells. Stimulation: none. Primary antibody: Allophycocyanin AKT2 antibody at 1.0 µg/mL for 20 min at 4°C.



Western Blot
Western Blot of AKT isoform specific antibodies: 50 ng of recombinant GST-AKT1, -AKT2 and -AKT3 proteins were separated by SDS PAGE (4-20% gel) and transferred onto 0.2 µm nitrocellulose. Lane 1: GST Tagged recombinant AKT1. Lane 2: GST Tagged recombinant AKT2. Lane 3: GST Tagged recombinant AKT3. The membrane was blocked with Blocking Buffer (p/n MB-070) for 1 h at room temperature. Mouse anti-AKT1 (p/n 200-501-E71) at a dilution of 1 µg/mL in Blocking Buffer and incubated for 16 h at 4°C. Goat anti-Rat IgG HRP (p/n 612-103-120) secondary antibodies were applied at 0.05 µg/mL in Blocking Buffer and incubated for 1 h at room temperature followed by detection with FemtoMax™ chemiluminescent reagent (p/n FEMTOMAX-110). Predicted/Observed size: The expected size for all recombinant GST-AKT isoforms is 85 kDa. Arrowheads indicate the position of AKT isoform.



Western Blot
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.

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Disclaimer

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