Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 200-301-401

AKT Antibody

Overview

Description:	Anti-AKT (MOUSE) Monoclonal Antibody - 200-301-401
Item No.:	200-301-401
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse, Rat, Chimpanzee
Host Species:	Mouse

Product Details

Background:	AKT 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 AKT1, 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-AKT Antibody is ideal for investigators involved in Cell Signaling, Neuroscience, Signal Transduction research.
Synonyms:	mouse anti-AKT Antibody, RAC-PK-alpha, Protein kinase B, PKB, C-AKT, RAC-alpha serine/threonine-protein kinase, Proto-oncogene c-Akt, AKT1, AKT2, AKT3
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	14E5.16C8.25F6
Format:	IgG

Target Details

Gene Name:	AKT1, AKT2, AKT3

Reactivity:	Human, Mouse, Rat, Chimpanzee
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-AKT Antibody was produced by repeated immunizations in mice with a synthetic peptides corresponding to residues internal to the human AKT1, AKT2, and AKT3 proteins.
Purity/Specificity:	Anti-AKT Antibody was purified by Protein A chromatography. This antibody is specific for human and mouse AKT protein. A BLAST analysis was used to suggest cross-reactivity with AKT1, AKT2, and AKT3 from human, mouse, rat and chimpanzee sources based on 100% homology with the immunizing sequence. Cross-reactivity with AKT1, 2, 3 was determined with Western Blot. Cross reactivity of AKT from other sources has not been determined.
Relevant Links:	• NCBI - 62241011 • UniProtKB - P31749 • GeneID - 207

Application Details

Tested Applications:	ELISA, WB
Application Note:	Mouse Anti-AKT Antibody is tested for ELISA and western blotting. This antibody is suitable for immunohistochemistry and immunoprecipitation. Expect a band approximately 54 - 56 kDa in size corresponding to AKT protein by western blotting in the appropriate cell lysate or extract. 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:	1:20,000
FC:	User Optimized
IHC:	20 µg/mL
WB:	1:500 - 1:3,000

Formulation

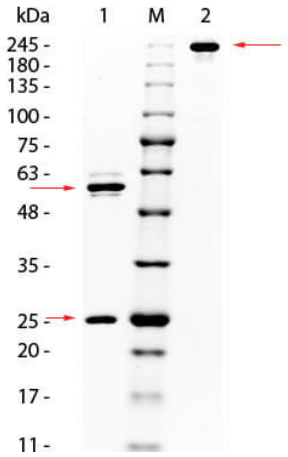
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer:	None

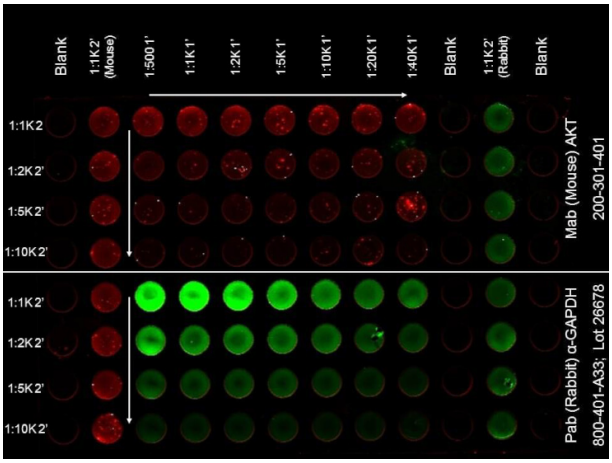
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. 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:	Expiration date is one (1) year from date of receipt.

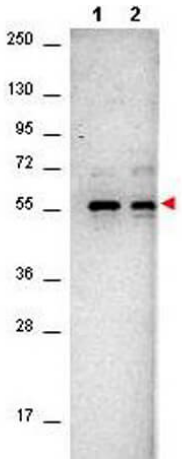
Images



SDS-PAGE
SDS PAGE of Mouse anti-AKT Monoclonal Antibody. Lane 1: Reduced Mouse anti-AKT Monoclonal Antibody. Lane M: 3 µL Opal Prestained Marker (p/n MB-210-0500). Lane 2: Non-Reduced Mouse anti-AKT Monoclonal Antibody. Load: 1 µg per lane. Predicted/Observed size: Non-Reduced at 160kDa/Observed at 245 kDa; Reduced at 55, 25 kDa. Non-reduced migrates slightly higher.

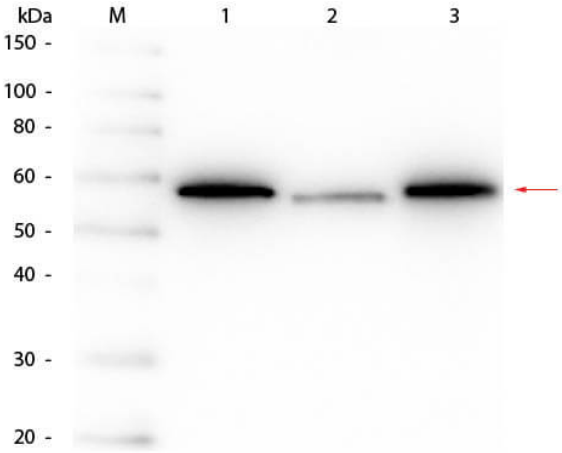


ELISA
ELISA of Mouse Anti-AKT Antibody. Antigen: HCT-116 cell line (p/n W09-001-GM4). Coating amount: Confluent in the 96 well plate. Primary antibody: AKT (top) or GAPDH (bottom) antibody at 2 µg/mL. Dilution series: Primary and Secondary Antibodies 2-fold. Mid-point concentration: N/A. Secondary antibody: DyLight™ 680 donkey secondary antibody and DyLight™ 800 goat secondary antibody starting at 1:1,000. Substrate: None.



Western Blot

Western Blot of Mouse anti-AKT antibody. Lane 1: NIH/3T3 cell lysates (p/n W10-000-358). Lane 2: PDGF stimulated NIH/3T3 cell lysates (p/n W10-001-377). Load: 10µg per lane. Primary antibody: Anti-AKT antibody at 1:400 for overnight at 4°C. Secondary antibody: Goat-anti-Mouse IgG HRP conjugated (p/n 610-103-121) was used at a 1:40,000 dilution for 1hr at 2-8°C with FemtoMax™ enhanced chemiluminescent reagent (p/n FEMTOMAX-100). Block: 5% BLOTTO (p/n B501-0500) in TBS for 2hr at RT. Observed size: ~56 kDa for AKT.



Western Blot

Western Blot of Mouse anti-AKT Monoclonal Antibody. Lane 1: His-AKT1 Recombinant Protein. Lane 2: His-AKT2 Recombinant Protein. Lane 3: His-AKT3 Recombinant Protein. Load: 50 ng per lane. Primary antibody: Mouse anti-AKT Monoclonal Antibody at 1:1,000 overnight at 4°C. Secondary antibody: HRP mouse secondary antibody at 1:40,000 for 30 min at RT. Block: MB-070 for 30 min at RT. Predicted/Observed size: 54-56 kDa, 54-56 kDa for AKT1, AKT2, AKT3.

References

- Figliozzi et al. New insights on thyroid hormone mediated regulation of herpesvirus infections. *Cell & Bioscience* (2017)

Disclaimer