

**Datasheet for 200-301-J34L****AKT1 Antibody****Overview**

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|----------------------|------------------------------------------------------|
| <b>Description:</b>  | Anti-AKT1 (MOUSE) Monoclonal Antibody - 200-301-J34L |
| <b>Item No.:</b>     | 200-301-J34L                                         |
| <b>Size:</b>         | 1 mg                                                 |
| <b>Applications:</b> | ELISA, FC, WB                                        |
| <b>Reactivity:</b>   | Human                                                |
| <b>Host Species:</b> | Mouse                                                |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Background:</b>   | AKT1 Antibody detects AKT1 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-AKT1 Antibody is ideal for investigators involved in Cell Signaling, Neuroscience and Signal Transduction research. |
| <b>Synonyms:</b>     | mouse anti-AKT1 antibody, AKT-1, PKB antibody, PKB gamma antibody, PKBGAMMA antibody, PRKBG antibody, Protein kinase Akt 1 antibody, Protein kinase B gamma antibody, RAC-gamma serine/threonine-protein kinase, RAC-PK-gamma                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Host Species:</b> | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Clonality:</b>    | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Clone ID:</b>     | 5E5.F5.D7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Format:</b>       | IgG2b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Target Details**

|                   |      |
|-------------------|------|
| <b>Gene Name:</b> | AKT1 |
|-------------------|------|

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| <b>Reactivity:</b>         | Human                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Immunogen Type:</b>     | Conjugated Peptide                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Immunogen:</b>          | Anti-AKT1 Antibody was produced in mice by repeated immunizations with a synthetic peptide corresponding to internal residues of human AKT1 protein.                                                                                                                                                                                                                                                                           |
| <b>Purity/Specificity:</b> | Anti-AKT1 antibody is directed against human AKT1. The antibody detects both unphosphorylated and phosphorylated forms of the protein. Anti-AKT1 antibody was purified from ascites by Protein A chromatography. Cross reactivity with AKT1 from other species has not been determined, however, the sequence of the immunogen shows 85% identity to mouse and 92% identity with rat, therefore, cross reactivity is expected. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"> <li><a href="#">UniProtKB - P31749</a></li> </ul>                                                                                                                                                                                                                                                                                                                                           |

## Application Details

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| <b>Tested Applications:</b> | ELISA, FC, WB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Application Note:</b>    | Anti-AKT1 Antibody is tested in ELISA, Flow Cytometry, and western blotting. This antibody is suitable in immunohistochemistry. Expect a band approximately 56 kDa in size corresponding to AKT1 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. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>ELISA:</b>               | 1:2,000 - 1:10,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>FC:</b>                  | User Optimized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>IHC:</b>                 | 20 µg/mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>WB:</b>                  | 1:500-1:2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Formulation

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| <b>Physical State:</b> | Liquid (sterile filtered)                                  |
| <b>Concentration:</b>  | 1.0 mg/ml by UV absorbance at 280 nm                       |
| <b>Buffer:</b>         | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| <b>Preservative:</b>   | None                                                       |
| <b>Stabilizer:</b>     | None                                                       |

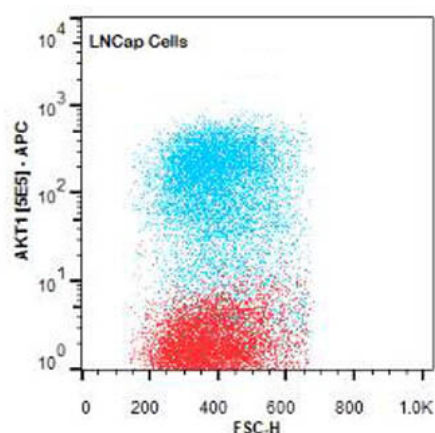
## Shipping & Handling

**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.

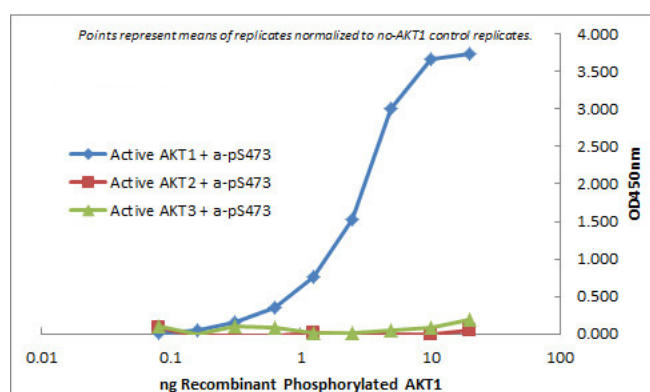
**Expiration:** Expiration date is one (1) year from date of receipt.

## Images



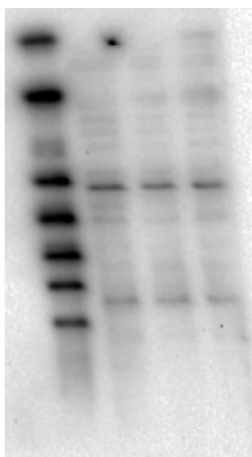
### Flow Cytometry

Flow Cytometry of Mouse anti-AKT1 antibody. Cells: LNCap Cells. Stimulation: none. Primary antibody: Allophycocyanin AKT1 antibody at 1.0 µg/mL for 20 min at 4°C.



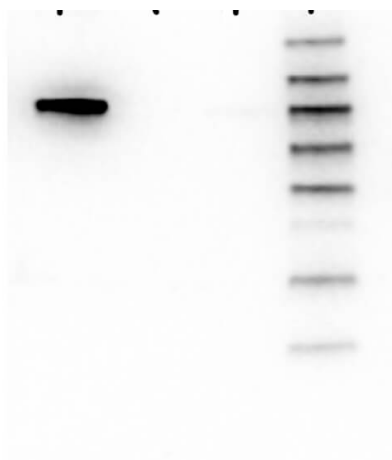
### ELISA

ELISA of Mouse Monoclonal anti-AKT1 antibody. Antigen: GST AKT1, GST AKT2, GST AKT3. Coating amount: starting from 50 ng/well. Primary antibody: Mouse monoclonal anti-AKT1 antibody at 100 ng/well. Dilution series: 2-fold. Mid-point concentration: 3 ng/mL Mouse monoclonal anti-AKT1 antibody. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000. Substrate: TMB (p/n TMBE-0100).



#### Western Blot

Western Blot of Mouse Anti-AKT1 antibody. Lane 1: Molecular Weight Marker. Lane 2: LnCap lysate (p/n W09-001-GJ9). Lane 3: Jurkat lysate (p/n W09-001-370). Lane 4: MDA-MB 468 lysate (p/n W09-001-GG9). Load: 5 µg per lane. Primary antibody: AKT1 antibody at 1:1000 for overnight at 4°C. Secondary antibody: Mouse secondary antibody at 1:20,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 56 kDa for AKT1.



#### Western Blot

Western Blot of Mouse anti-AKT1 antibody. Lane 1: GST-AKT1. Lane 2: GST-AKT2. Lane 3: GST-AKT3. Lane 4: Molecular Weight Marker. Load: 25 ng per lane. Primary antibody: AKT1 antibody at 1:1000 for overnight at 4°C. Secondary antibody: Mouse secondary antibody at 1:40,000 for 30 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 78 kDa for AKT1. Other band(s): none.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.