

DATASHEET

AKT (Phospho-S473) Rabbit Polyclonal Antibody

CAT. NO. APA06635

KEY FEATURES

| | | | |
|---------------|---|---------------|---------------------|
| Target | AKT (Phospho-S473) | Source / Host | Rabbit |
| Reactivity | Human, Mouse, Rat, Bovine, Sheep, Zebrafish | Clonality | Polyclonal |
| Applications | WB, IHC, IF/ICC | Conjugation | Unconjugated |
| Form / Buffer | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. | | Storage at -20°C |

BACKGROUND

AKT1 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 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 . AKT is responsible of the regulation of glucose uptake by mediating insulin-induced translocation of the SLC2A4/GLUT4 glucose transporter to the cell surface .

APPLICATION

To ensure optimal assay performance, AREX recommends conducting reagent titration tailored to each testing system for optimal detection results.

| | |
|--------|----------------|
| WB | 1:500 - 1:1000 |
| IHC | 1:50 - 1:100 |
| IF/ICC | 1:50 - 1:200 |

*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

PRODUCT OVERVIEW

| | |
|-------------------|--|
| Description | Rabbit polyclonal antibody to AKT (Phospho-S473) |
| Specificity | Recognizes endogenous levels of AKT protein only when phosphorylated at S473. |
| Antibody Type | Primary antibody |
| Immunogen | KLH-conjugated synthetic phosphopeptide corresponding to residues surrounding S473 of human AKT protein. The exact sequence is proprietary. |
| Purification | The antibody was purified by immunogen affinity chromatography. |
| Molecular Weight | Predicted: 55 kD; Observed: 60 kD |
| Form/Buffer | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| Alternative Names | AKT1; PKB; RAC; RAC-alpha serine/threonine-protein kinase; Protein kinase B; PKB; Protein kinase B alpha; PKB alpha; Proto-oncogene c-Akt; RAC-PK-alpha; AKT2; RAC-beta serine/threonine-protein kinase; Protein kinase Akt-2; Protein kinase B beta; PKB beta; RAC-PK-beta; AKT3; PKBG; RAC-gamma serine/threonine-protein kinase; Protein kinase Akt-3; Protein kinase B gamma; PKB gamma; RAC-PK-gamma; STK-2 |
| Gene Symbol | AKT1; AKT2; AKT3 |
| Entrez Gene | 207; 208; 10000(Human); 11651; 11652; 23797(Mouse); 24185; 25233; 29414(Rat) |
| SwissProt | P31749; P31751; Q9Y243(Human); P31750; Q60823; Q9WUA6(Mouse); P47196; P47197; Q63484(Rat) |

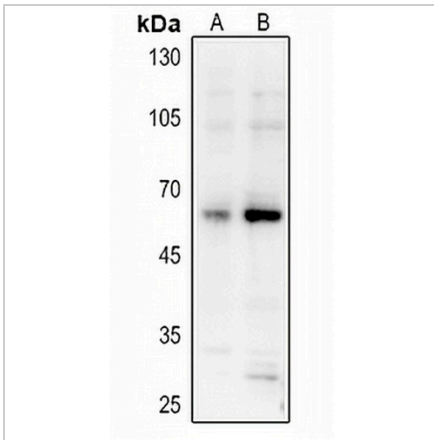
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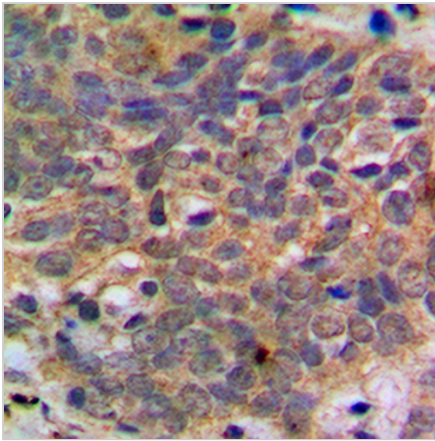
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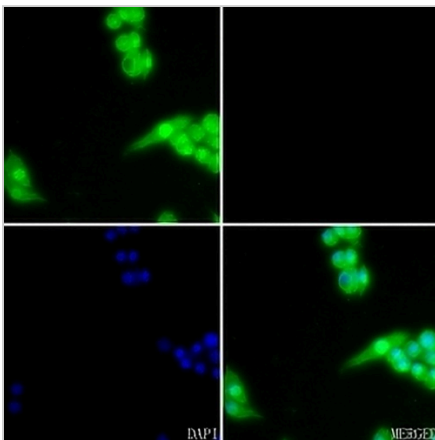
DATA



Western blot analysis of AKT (Phospho-S473) expression in HEK293T treated with insulin (A), HEK293T treated with serum (B) whole cell lysates. (Predicted band size: 55 kD; Observed band size: 60 kD)



Immunohistochemical analysis of AKT (Phospho-S473) staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



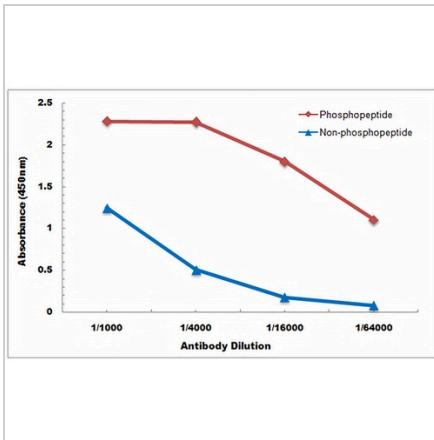
Immunofluorescent analysis of AKT (Phospho-S473) staining in C6 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AREX® Fluor 488 -conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AREX® Fluor 594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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DATA (CONTINUED)



Direct ELISA antibody dose-response curve using Anti-AKT (Phospho-S473) Antibody. Antigen (Phosphopeptide and non-phosphopeptide) concentration is 5 ug/ml. Goat Anti-Rabbit IgG (H&L) - HRP was used as the secondary antibody, and signal was developed by TMB substrate.

STORAGE

Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.