

# Human Akt1 antibody

Catalog Number: ATGA0480

## PRODUCT INFORMATION

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**Catalog number**

ATGA0480

**Clone No.**

AT6D5

**Product type**

Monoclonal Antibody

**UnitProt No.**

P31749

**NCBI Accession No.**

NP\_001014432

**Alternative Names**

Protein kinase B, Protein kinase B alpha, Proto-oncogene c-Akt, RAC-PK-alpha

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human AKT1 (1-480aa) purified from insect cell.

**Isotype**

IgG2a kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF, FACS

**Usage**

The antibody has been tested by Western blot analysis, Flow cytometry and ICC/IF to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

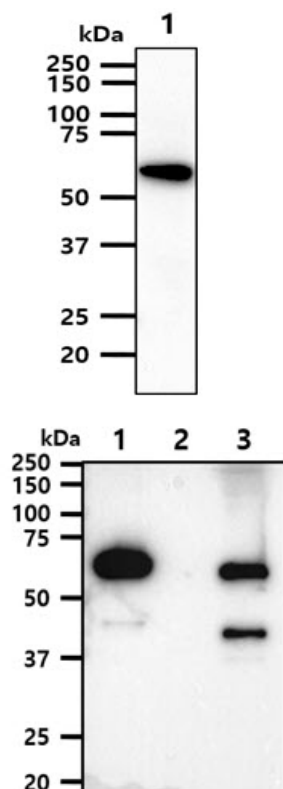
AKT1, also known as RAC-alpha serine/threonine-protein kinase, is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery.

### General References

Lindhurst MJ, et al (2011) N Engl J Med. 365(7): 611-9.

## DATA

### Western blot analysis (WB)



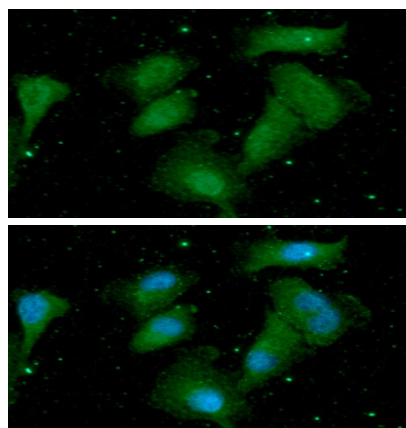
The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human AKT1/3 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.  
Lane 1.: NIH3T3 cell lysate

The recombinant proteins (50ng) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human AKT1/3 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.  
Lane 1.: Recombinant Human AKT1  
Lane 2.: Recombinant Human AKT2  
Lane 3.: Recombinant Human AKT3

### Immunocytochemistry/Immunofluorescence (ICC/IF)

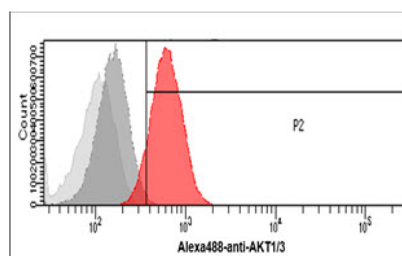
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ICC/IF analysis of AKT1/3 in A549 cells. The cell was stained with ATGA0480 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

### Flow cytometry (FACS)



Flow cytometry analysis of AKT1/3 in A549 cells. The cell was stained with ATGA0480 at 2-5ug for 1x10<sup>6</sup> cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).