



Datasheet for ABIN725195

anti-AKT 1/2/3 antibody (AA 401-479)



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Overview

Quantity:	100 µL
Target:	AKT 1/2/3
Binding Specificity:	AA 401-479
Reactivity:	Human, Mouse, Rat, Cow, Pig
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This AKT 1/2/3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunofluorescence (Cultured Cells) (IF (cc)), Flow Cytometry (FACS), ELISA, Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human AKT1
Isotype:	IgG
Cross-Reactivity:	Cow, Human, Mouse, Pig, Rat
Predicted Reactivity:	Dog,Cow,Sheep,Chicken
Purification:	Purified by Protein A.

Target Details

Target:	AKT 1/2/3
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Target Details

Alternative Name: [AKT1/2/3 \(AKT 1/2/3 Products\)](#)

Background: Synonyms: AKT, PKB, RAC, CWS6, PRKBA, PKB-ALPHA, RAC-ALPHA, RAC-alpha serine/threonine-protein kinase, Protein kinase B, Protein kinase B alpha, PKB alpha, Proto-oncogene c-Akt, RAC-PK-alpha, AKT1, RAC-gamma serine/threonine-protein kinase, Protein kinase Akt-3, Protein kinase B gamma, PKB gamma, RAC-PK-gamma, STK-2, PKBG
Background: AKT1-specific substrates have been recently identified, including palladin (PALLD), which phosphorylation modulates cytoskeletal organization and cell motility, prohibitin (PHB), playing an important role in cell metabolism and proliferation, and CDKN1A, for which phosphorylation at 'Thr-145' induces its release from CDK2 and cytoplasmic relocation. These recent findings indicate that the AKT1 isoform has a more specific role in cell motility and proliferation. Phosphorylates CLK2 thereby controlling cell survival to ionizing radiation.

Gene ID: 207

UniProt: [P31749](#)

Application Details

Application Notes: WB 1:300-5000
ELISA 1:500-1000
FCM 1:20-100
IHC-P 1:200-400
IHC-F 1:100-500
IF(IHC-P) 1:50-200
IF(IHC-F) 1:50-200
IF(ICC) 1:50-200

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 1 µg/µL

Buffer: 0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

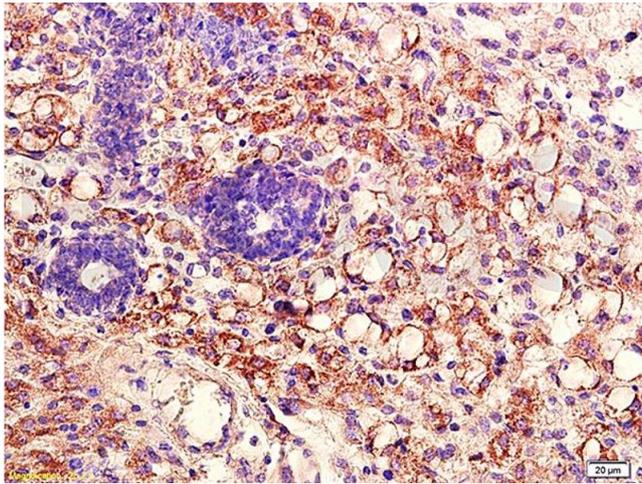
Handling

Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

Publications

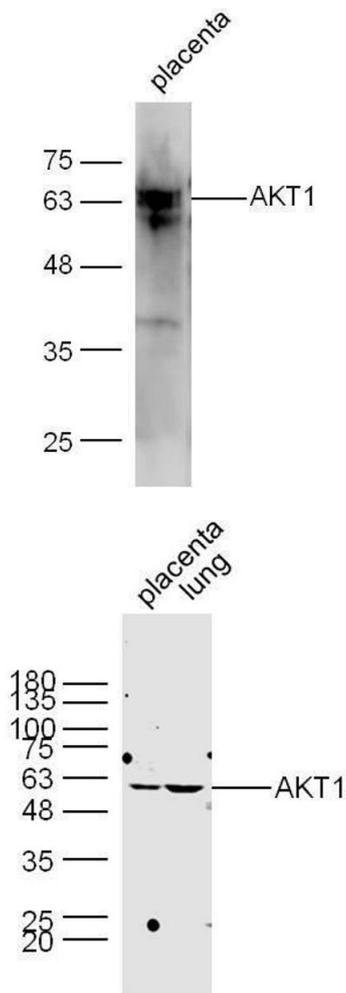
- Product cited in:
- Liu, Liu, Liu, Ma, Zhao: "Surgical incision induces learning impairment in mice partially through inhibition of the brain-derived neurotrophic factor signaling pathway in the hippocampus and amygdala." in: **Molecular pain**, Vol. 14, pp. 1744806918805902, (2019) ([PubMed](#)).
- Zhang, Zhao, Zhang, Hao, Yu, Min, Li, Ma, Chen, Yi, Tang, Meng, Liu, Wang, Shen, Zhang: "Decrease in male mouse fertility by hydrogen sulfide and/or ammonia can be inheritable." in: **Chemosphere**, Vol. 194, pp. 147-157, (2018) ([PubMed](#)).
- Zhao, Zhang, Liu, Zhang, Hao, Li, Chen, Shen, Tang, Min, Meng, Wang, Yi, Zhang: "Hydrogen Sulfide and/or Ammonia Reduces Spermatozoa Motility through AMPK/AKT Related Pathways." in: **Scientific reports**, Vol. 6, pp. 37884, (2016) ([PubMed](#)).
- Zhang, Huang, Guo, Gou, Hinsdale, Lloyd, Liu: "MicroRNA-26b Modulates the NF-κB Pathway in Alveolar Macrophages by Regulating PTEN." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 195, Issue 11, pp. 5404-14, (2015) ([PubMed](#)).
- Liang, Zeng, Wang, Shen, Li, Ma, Ci, Yu, Jia, Sun, Liu, Liu, Li, Yu, Chen, Jia: "Histone demethylase RBP2 induced by Helicobacter Pylori CagA participates in the malignant transformation of gastric epithelial cells." in: **Oncotarget**, Vol. 5, Issue 14, pp. 5798-807, (2015) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



Immunohistochemistry

Image 1. Formalin-fixed and paraffin embedded: mouse transplant lymphoma labeled with Anti-PKB Polyclonal Antibody, Unconjugated 1:200 followed by conjugation to the secondary antibody and DAB staining



Western Blotting

Image 2. Mouse placenta lysate with Anti-AKT1/3 Polyclonal Antibody Unconjugated at 1:5000 for 90 min at 37°C.

Western Blotting

Image 3. Lane 1: Mouse Placenta lysates; *Lane 2: Mouse Lung lysates probed with AKT1/3 Polyclonal Antibody, unconjugated at 1:300 overnight at 4°C followed by a conjugated secondary antibody at 1:10000 for 60 minutes at 37°C.*



Successfully validated (Flow Cytometry (FACS))

by [Flow Cytometry & Cell Separation Facility, Purdue University](#)

Report Number: 029769

Date: Jul 22 2014

Lot Number: 131113

Method validated: Flow Cytometry (FACS)

Positive Control: [MDA-MB-468 cells](#) - lower expression

Notes: A strong specific signal is observed in both of the positive control cells stained with anti-AKT1 plus secondary antibody compared with isotype, secondary only and unstained cells.

Primary Antibody: - Antigen: V-Akt Murine Thymoma Viral Oncogene Homolog 1 (AKT1) - Catalog number: ABIN725195 - Supplier: Bioss - Supplier catalog number: bs-0115R - Lot number: 131113 - Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA

Secondary Antibody: - Antibody: Goat anti-rabbit IgG-FITC - Supplier: Jackson Immunoresearch - Catalog number: 111-096-144 - Lot number: 115629 - Dilution: 1:200 in 1X PBS containing 0.5% BSA

Isotype: - Antibody: Rabbit IgG - Catalog number: 3900S - Supplier: Cell Signaling Technology - Lot number: 16 - Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA

Controls:

- Positive control: MCF-7 cells
- Low positive control: MDA-MB-468 cells
- Isotype control: Both cell lines treated with rabbit IgG instead of the primary antibody to confirm that primary antibody binding is specific.
- Secondary only control: Both cell lines treated with Goat anti-rabbit IgG-FITC to confirm no background signal produced from secondary antibody alone

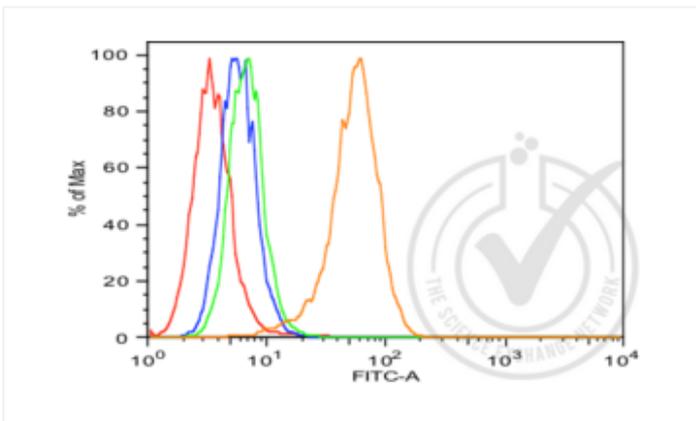
Protocol:

- Control cells were cultured in DMEM + 10% FBS. - Control cells were washed once with phosphate-buffered saline (PBS) and harvested with a non-enzymatic cell dissociation solution (CellStripper, Mediatech, Inc).
- Detached cells were washed and resuspended in 0.5 mL 1X PBS containing 0.5% BSA.
- An equivalent amount of pre-warmed 4% paraformaldehyde was added and the cells were incubated for 10 min at 37 °C.
- Cells were washed in 1X PBS containing 0.5% BSA and resuspended in 1 mL of ice-cold 90% methanol for 30 min on ice.
- Cells were spun out of the methanol and washed twice by resuspending in 1X PBS containing 0.5% BSA.

- Cells were resuspended in 100 μ L 1X PBS containing 0.5% BSA: - unstained cells - secondary antibody alone - isotype control antibody + secondary antibody - primary antibody + secondary antibody
- Cells were incubated for 30 min on ice.
- Labeled cells were washed twice in PBS containing 0.5% BSA.
- Cells were resuspended with 1X PBS containing 0.5% BSA + 10% goat serum and incubated for 15 min at room temperature.
- Goat anti-rabbit IgG-FITC secondary antibody (Jackson ImmunoResearch) was added at a 1:200 dilution. The cells were incubated for 30 min in the dark on ice.
- Labeled cells were washed twice in PBS containing 0.5% BSA.
- Cells were analyzed on a FACSAria III (BD Biosciences) using a blue laser (488 nm excitation / 525 nm emission).

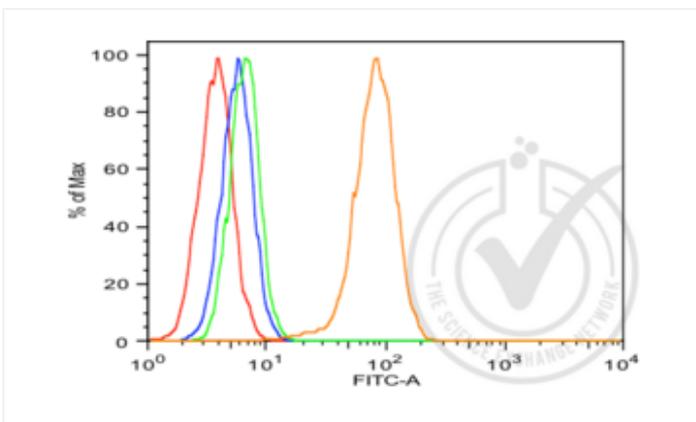
Experimental Notes: Nothing to note.

Images for Validation report #029769



Validation image no. 1 for anti-AKT 1/2/3 (AA 401-479) antibody (ABIN725195)

Figure 1: Positive control (high expression) MCF7 cells. The red histogram is unstained cells, the blue histogram is cells stained with secondary antibody alone, the green histogram is cells stained with rabbit IgG isotype control antibody plus secondary antibody and the orange histogram is cells stained with anti-AKT1 plus secondary antibody. The secondary antibody is a goat anti-rabbit IgG-FITC (Jackson ImmunoResearch).



Validation image no. 2 for anti-AKT 1/2/3 (AA 401-479) antibody (ABIN725195)

Figure 2: Positive control (lower expression) MDA-MB-468 cells. The red histogram is unstained cells, the blue histogram is cells stained with secondary antibody alone, the green histogram is cells stained with rabbit IgG isotype control antibody plus secondary antibody and the orange histogram is cells stained with anti-AKT1 plus secondary antibody. The secondary antibody is a goat anti-rabbit IgG-

FITC (Jackson ImmunoResearch).