BioVision

05/14

For research use only

AKT1 Antibody (NT)

ALTERNATE NAMES: PKB, RAC, Protein kinase B, Protein kinase B alpha, Short PKB alpha, Proto-oncogene c-Akt, RAC-PK-alpha, RAC-alpha serine/threonine-protein kinase.

CATALOG #: 6745-100

AMOUNT: 100 µl

HOST/ISOTYPE: Rabbit IgG

IMMUNOGEN: This AKT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 115-144 amino acids from the N-terminal region of human AKT1.

PURIFICATION: This antibody is purified through a protein A column, followed by peptide affinity purification.

MOLECULAR WEIGHT: ~55.68 kDa

FORM: Liquid

FORMULATION: Supplied in PBS with 0.09% (W/V) sodium azide.

SPECIES REACTIVITY: Human. Predicted cross reactivity with mouse and Bovine samples.

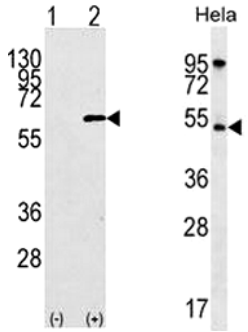
STORAGE CONDITIONS: Maintain refrigerated at 2-8°C for up to 6 months. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.

DESCRIPTION: The serine/threonine kinase Akt family contains several members, including Akt1 (also designated PKB or RacPK), Akt2 and Akt 3, which exhibit sequence homology with the protein kinase A and C families and are encoded by the c-Akt proto-oncogene. They have a pleckstrin homology domain. Akt1 and Akt2 are activated by PDGF stimulation. This activation is dependent on PDGFR-ʃ tyrosine residues 740 and 751, which bind the subunit of the phosphatidylinositol 3-kinase (PI 3-kinase) complex. Activation of Akt1 by insulin or insulin-growth factor-1(IGF-1) results in phosphorylation of both Thr 308 and Ser 473. Phosphorylation of both residues is important to generate a high level of Akt1 activity, and the phosphorylation of Thr 308 is not dependent on phosphorylation of Ser 473 in vivo. Thus, Akt proteins become phosphorylated and activated in insulin/IGF-1-stimulated cells by an upstream kinase(s). The activation of Akt1 and Akt2 is inhibited by the PI kinase inhibitor wortmannin, suggesting that the protein signals downstream of the PI kinases.

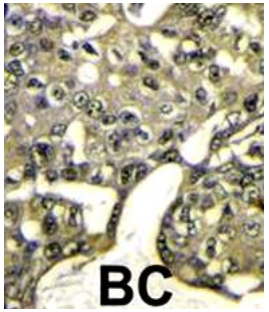
APPLICATION: Western blot: ~1:1000, IHC: ~1:50-1:100, FACS: ~1:10-1:50, IF: ~1:10-1:50.

Note: This information is only intended as a guide. The optimal dilutions must be determined by the user.

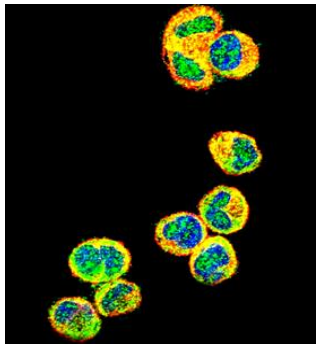
FOR RESEARCH USE ONLY! Not to be used on humans.



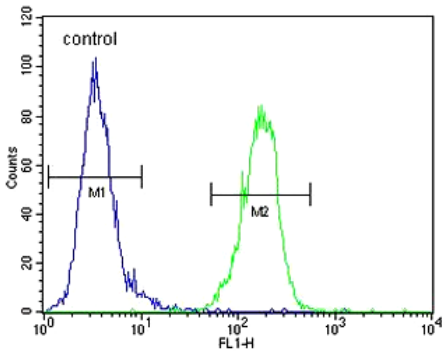
AKT1 Antibody western blot analysis in 293 cell lysates (2 µg/lane) either nontransfected (Lane 1) or transiently transfected with the AKT1 gene (Lane 2) and HeLa cell lysate (35 µg/lane).



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with AKT1 antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.



Confocal immunofluorescent analysis with MDA-MB435 cells followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).DAPI was used to stain the cell nuclear (blue).



FACS analysis with MDA-MB435 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies was used for the analysis.

RELATED PRODUCTS:

- AKT/PKB Antibody **(Cat. No. 3247-100)**
- AKT2 Antibody **(Cat. No. 3155-100)**
- AKT3 Antibody **(Cat. No. 3159-100)**
- AKT3 Antibody **(Cat. No. 3162-100)**
- AKT3 Antibody **(Cat. No. 3163-100)**
- AKT3 Antibody **(Cat. No. 3164-100)**
- Phospho-AKT Antibody **(Cat. No. 3257-100)**

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