

# AKT1 Antibody (CT)

**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 #:** 6744-100

**AMOUNT:** 100 µl

**HOST/ISOTYPE:** Rabbit IgG

**IMMUNOGEN:** This AKT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 438-468 amino acids from the C-terminal region of human AKT1.

**PURIFICATION:** This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**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 rat and mouse samples.

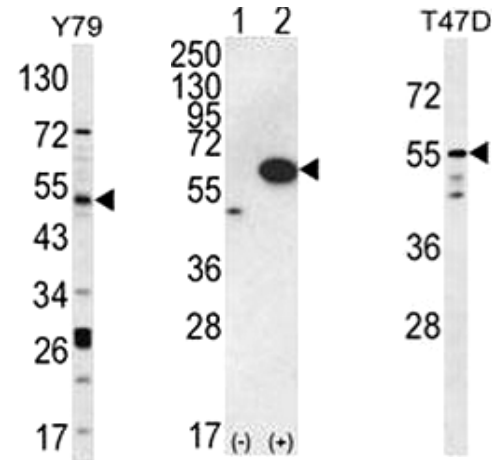
**STORAGE CONDITIONS:** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.

**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- $\beta$  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, FACS: ~1:10-1:50.

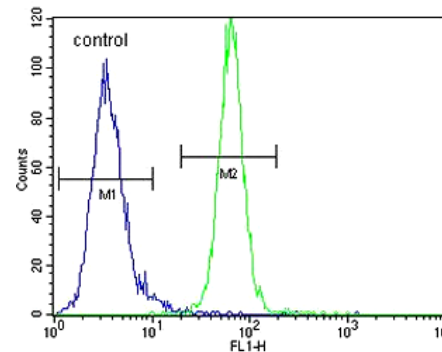
**Note:** This information is only intended as a guide. The optimal dilutions must be determined by the user.

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



AKT1 Antibody western blot analysis in Y79 cell lysate, 293 cell lysates (2 µg/lane) either nontransfected (Lane 1) or transiently transfected with the AKT1 gene (Lane 2) and T47D cell line lysates (35 µg/lane).

## MDA-MB435



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)