

# AKT1 (Thr308) Antibody

**ALTERNATE NAMES:** PKB, RAC, Protein kinase B, Protein kinase B alpha, Short PKB alpha, Proto-oncogene c-Akt, RAC-PK-alpha

**CATALOG #:** 6742-100

**AMOUNT:** 100 µl

**HOST/ISOTYPE:** Rabbit IgG

**IMMUNOGEN:** This AKT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 282-309 amino acids from 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, Rat, Bovine and Xenopus 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- $\gamma$  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.

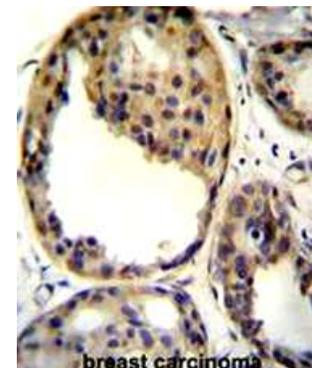
**Note:** This information is only intended as a guide. The optimal dilutions must be determined by the user.

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

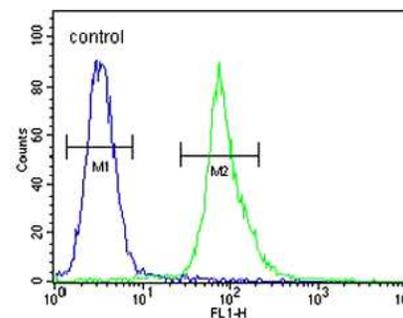
MDA-MB435



AKT1 Antibody western blot analysis in 293 cell line lysates and mouse liver tissue lysates (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.



FACS analysis of 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)