

Phospho-AKT1 (T450)

Cat#: ET1612-73

Product Type: Recombinant rabbit monoclonal IgG, primary antibodies

Species reactivity: Human, Mouse, Rat

Applications: WB, IHC, IP

Molecular Wt.: 56 kDa

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. All members of the Akt family have a pleckstrin homology domain. Akt1 and Akt2 are activated by PDGF stimulation. This activation is dependent on PDGFR- β 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.

Immunogen:

Synthetic phospho-peptide corresponding to residues surrounding Thr450 of human AKT1.

Positive control:

MCF-7, human breast carcinoma tissue.

Subcellular location:

Cytoplasm, Nucleus, Cell membrane.

Database links:

SwissProt: P31749 (Human) P31750 (Mouse) P47196 (Rat)

Recommended Dilutions:

WB: 1:1,000-1:2,000 **IHC:** 1:50-1:100

Storage Buffer:

1*TBS (pH7.4), 1%BSA, 40%Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction:

Store at +4° C after thawing. Aliquot store at -20° C. Avoid repeated freeze / thaw cycles.

Purity:

ProA affinity purified.

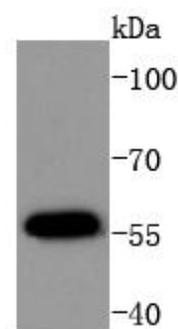


Fig1: Western blot analysis of Phospho-AKT1 (T450) on MCF-7 cells lysates using anti-Phospho-AKT1(T450) antibody at 1/1,000 dilution.

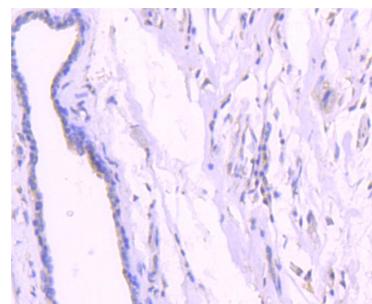


Fig2: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using anti-Phospho-AKT1 (T450) antibody. Counter stained with hematoxylin.

Background References

1. Liang D et al. Therapeutic efficacy of apelin on transplanted mesenchymal stem cells in hindlimb ischemic mice via regulation of autophagy. *Sci Rep* 6:21914 (2016).
2. Ma J et al. microRNA-22 attenuates neuronal cell apoptosis in a cell model of traumatic brain injury. *Am J Transl Res* 8:1895-902 (2016).

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Applications: WB=Western blot IP=Immunoprecipitation IHC=Immunohistochemistry IF=Immunofluorescence FC=Flow cytometry
Species Cross-Reactivity: H=human M=mouse R=rat Hm=hamster Mk=monkey Mi=mink C=chicken Dm=D.melanogaster X=Xenopus Z=zebrafish
B=bovine Dg=dog Pg=pig Sc=S.