

AP06488PU-N**Polyclonal Antibody to AKT1 / PKB - Aff - Purified****Alternate names:**

Akt-1, C-AKT, Protein kinase B, RAC-PK-alpha, RAC-alpha serine/threonine-protein kinase

Quantity:

0.1 mg

Concentration:

1.0 mg/ml

Background:

AKT, also known as protein kinase B (PKB), is a 57 kDa serine/threonine protein kinase. There are three mammalian isoforms of Akt: AKT1 (PKB alpha), AKT2 (PKB beta) and AKT3 (PKB gamma) with AKT2 and AKT3 being approximately 82% identical with the AKT1 isoform. Each isoform has a pleckstrin homology (PH) domain, a kinase domain and a carboxy terminal regulatory domain. AKT was originally cloned from the retrovirus AKT8, and is a key regulator of many signal transduction pathways. Its tight control over cell proliferation and cell viability are manifold; overexpression or inappropriate activation of AKT has been seen in many types of cancer. AKT mediates many of the downstream events of phosphatidylinositol 3 kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI3 kinase recruits AKT to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT has two main roles: (i) inhibition of apoptosis; (ii) promotion of proliferation. AKT has been shown to play a role in such metabolic processes as glucose transport, glycogen synthesis, glycolysis, and protein synthesis. It had also been shown to promote cell survival by inhibiting apoptosis through its ability to phosphorylate and inactivate several targets, including Bad, Forkhead transcription factors, and caspase 9.

Uniprot ID:[P31749](#)**NCBI:**[NP_001014431.1](#)**GeneID:**[207](#)**Host:**

Rabbit

Immunogen:

Synthetic peptide, corresponding to amino acids 220-270 of Human AKT1.

Format:**State:** Liquid purified Ig fraction**Purification:** Affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE)**Buffer System:** Phosphate buffered saline (PBS), pH 7.2.**Preservatives:** 15 mM sodium azide**Applications:****Western blot:** 1/500-1/1000.**Immunohistochemistry on paraffin sections:** 1/50-1/200.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight:

~ 60 kDa

Specificity:This antibody detects endogenous levels of Akt protein.
(region surrounding Glu242)

Species Reactivity:**Tested:** Human.**Expected from sequence similarity:** Mouse and Rat.**Storage:**

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

Pictures:**Western blot (WB)** analysis of Akt1 antibody (Cat.-No.: AP06488PU-N) at 1/500 dilutionLane1:HEK293T whole cell lysateLane2:Raw264.7 whole cell lysateLane3:PC12 whole cell lysate