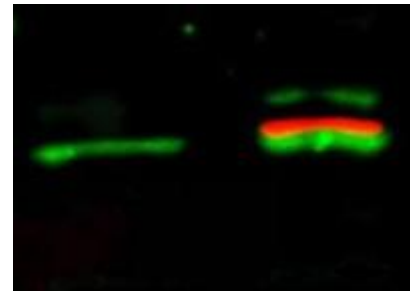


R1464**Polyclonal Antibody to AKT1/AKT2/AKT3 (C-term) - Serum**

Alternate names:	Akt-1, C-AKT, Protein kinase B, RAC-PK-alpha, RAC-alpha serine/threonine-protein kinase
Quantity:	0.2 ml
Concentration:	75 mg/ml (by refractometry)
Background:	AKT is a component of the PI-3 kinase pathway and is activated by phosphorylation at Ser 473 and Thr 308. AKT is a cytoplasmic protein also known as Protein Kinase B (PKB) and rac (related to A and C kinases). AKT is a key regulator of many signal transduction pathways. AKT Exhibits tight control over cell proliferation and cell viability. Overexpression or inappropriate activation of AKT is noted in many types of cancer. AKT mediates many of the downstream events of PI 3-kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI 3-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.
Uniprot ID:	P31749
NCBI:	NP_001014431.1
GeneID:	207
Host:	Rabbit
Immunogen:	Synthetic peptide corresponding to the C-terminus (460-480) of Human, Rat and Mouse and chicken AKT proteins conjugated to KLH using maleimide. A residue of cysteine was added to the amino terminal end to facilitate coupling. AA Sequence: C-R-PH-F-P-Q-F-S-Y-S-A-S-G-T-A
Format:	State: Liquid whole serum. Buffer System: 0.02M Potassium Phosphate, 0.15M Sodium Chloride, pH 7.2 containing 0.01% Sodium Azide
Applications:	ELISA: 1/2,000-1/10,000. Immunoprecipitation. Transfected/Primary cell culture. Western Blot (1/500-1/2,000): Detect a single band of the expected apparent molecular weight. Immunofluorescence using paraformaldehyde-fixed primary cardiomyocyte cultures (1/100-1/1,000). Immunohistochemistry on Formalin-Fixed Paraffin-Embedded Sections (1/500-1/2,000). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antiserum reacts with the AKT.

- Species Reactivity:** **Tested:** Human.
Expected from sequence similarity: Rat, Mouse and Chicken.
- Storage:** Store the antibody 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.
- General Readings:** 1. Lawlor MA, Alessi DR. PKB/Akt: a key mediator of cell proliferation, survival and insulin responses? *J Cell Sci.* 2001 Aug;114(Pt 16):2903-10. PubMed PMID: 11686294.
2. Alessi DR. Discovery of PDK1, one of the missing links in insulin signal transduction. Colworth Medal Lecture. *Biochem Soc Trans.* 2001 May;29(Pt 2):1-14. PubMed PMID: 11356119.

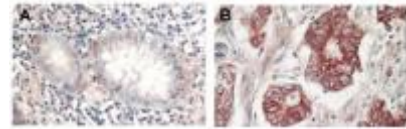
Pictures: WB of detection of unphosphorylated and phosphorylated Rabbit Anti-AKT antibody. Lane 1: unstimulated NIH/3T3 lysates contain inactive unphosphorylated Akt1, green band. Lane 2: PDGF stimulated NIH/3T3 lysate contains both inactive (green band) and activated phosphorylated Akt1 (red band). Rabbit anti-Akt (pan) and mouse anti-Akt pS473 specific antibodies at 1:1000. Secondary antibody: DyLight™ 549 conjugated anti-rabbit IgG (green) and DyLight™ 649 conjugated anti-mouse IgG (red) at 1:10,000.



Western Blot of Rabbit Anti-AKT antibody. Lane 1: NIH/3T3 whole cell lysate. Load: 20 ug per lane. Primary antibody: AKT antibody at 1:500 for overnight at 4°C. Secondary antibody: HRP conjugated Gt-a-Rabbit IgG (611-103-122) at 1:10,000 preceded color development using Pierce Chemical's SuperSignal™ substrate. Block: MOPS buffer overnight at 4°C.
Predicted/Observed size: 128 kDa, 128 kDa for AKT. Other band(s): none.



Immunohistochemistry of Rabbit Anti-AKT antibody. Tissue: (A) normal colon tissue, (B) colon tumor tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: AKT antibody at 1:1,000 dilution for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: AKT is nuclear. Staining: AKT as precipitated red signal with hematoxylin purple nuclear counterstain.



Immunofluorescence Microscopy of Rabbit Anti-AKT Antibody. Tissue: neonatal rat cardiomyocytes. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: AKT antibody at 1:80 dilution for 1 h at RT. Secondary antibody: Texas-red™ conjugated rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: AKT is nuclear. Staining: Anti-AKT staining appears green. Actin filaments are labeled red using a Texas-red™ conjugated phalloidin.

