

Anti-AKT (SHEEP) Antibody - 600-601-401S
Code: 600-601-401S

Size: 25 µL

Product Description: Anti-AKT (SHEEP) Antibody - 600-601-401S

Concentration: 0.9 mg/mL by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Sheep
Gene Name	AKT1
Species Reactivity	human, mouse, rat
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.1% (w/v) Sodium Azide
Storage Condition	Store AKT antibody at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Synonyms	sheep anti-AKT Antibody, RAC-PK-alpha, Protein kinase B, PKB, C-AKT, RAC-alpha serine/threonine-protein kinase, Proto-oncogene c-Akt, AKT1, AKT 1, AKT-1
Application Note	Anti-AKT affinity purified antibody is suitable for ELISA, IHC, IF and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 55-60 kDa in size corresponding to AKT1 by western blotting in the appropriate cell lysate or extract. Cell Signaling, Neuroscience, Signal Transduction research.
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. Anti-AKT Antibody is ideal for investigators involved in Cell Signaling, Neuroscience, Signal Transduction research.
Purity And Specificity	This antibody is directed against AKT and reacts with the AKT from human tissues. Based on sequence we expect this antibody to react as well with rat, mouse and chicken AKT.
Assay Dilutions	User Optimized
ELISA	1:5,000 - 1:20,000
Western Blot	1:500 - 1:2,000
Immunohistochemistry	User Optimized
IF Microscopy	User Optimized
Flow Cytometry	User Optimized
Other Assays	User Optimized
Expiration	Expiration date is three (3) months from date of opening.
Immunogen	This AKT affinity purified antibody was prepared by repeated immunizations with a synthetic peptide corresponding to an internal region of human AKT1 protein. A residue of cysteine was added to facilitate coupling.

General Reference

Lawlor, M. A. and Alessi, D.R. (2001). PKB/AKT: a key mediator of cell proliferation, survival and insulin responses. *J. Cell Science* 114:2903-2910. Alessi, D. R. (2001). Discovery of PDK1, one of the missing links in insulin signal transduction. *Biochem. Soc. Trans.* 29,1 -14. Chu,S., Li,L., Singh,H. and Bhatia,R. (2007) BCR-tyrosine 177 plays an essential role in Ras and Akt activation and in human hematopoietic progenitor transformation in chronic myelogenous leukemia. *Cancer Res.* 67 (14), 7045-7053. Liu,L.Z., Zhou,X.D., Qian,G., Shi,X., Fang,J. and Jiang,B.H. (2007) AKT1 amplification regulates cisplatin resistance in human lung cancer cells through the mammalian target of rapamycin/p70S6K1 pathway. *Cancer Res.* 67 (13), 6325-6332. Dan,H.C., Adli,M. and Baldwin,A.S. (2007) Regulation of mammalian target of rapamycin activity in PTEN-inactive prostate cancer cells by I kappa B kinase alpha. *Cancer Res.* 67 (13), 6263-6269.

Related Products

000-000-401	AKT CONTROL PEPTIDE - 000-000-401
200-301-268	Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268
200-301-269	Anti-AKT pT308 (MOUSE) Monoclonal Antibody - 200-301-269
200-301-401	Anti-AKT (MOUSE) Monoclonal Antibody - 200-301-401

Related Links

NCBI - 62241011

<http://www.ncbi.nlm.nih.gov/protein/62241011>

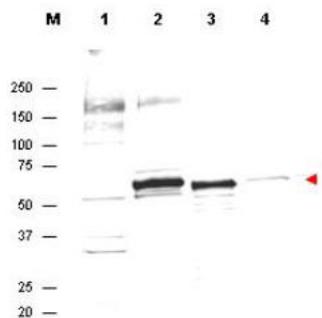
UniProtKB - P31749

<http://www.uniprot.org/uniprot/P31749>

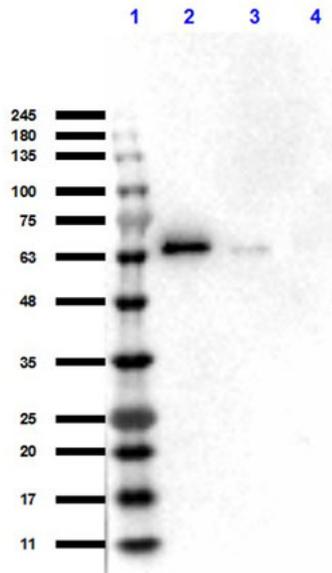
GeneID - 207

Images

- 1 Western Blot of Anti-AKT Antibody. Lane 1: HeLa cells. Lane 2: H2O2 treated MCF7 cells. Lane 3: Recombinant AKT. Lane 4: A431 cells. Load: 35 µg per lane. Primary antibody: AKT antibody at 1:300 for overnight at 4°C. Secondary antibody: IRDYE800™ conjugated Dnky-a-Sheep IgG was used at a 1:10,000 dilution for 45 min at room temperature. Block: 1% BLOTTO overnight at 4°C. Predicted/Observed size: ~55-60 kDa for AKT. Other band(s): unspecific.



- 2 Western Blot of Sheep Anti-AKT Antibody. Lane 1: Opal prestained Molecular weight markers (p/n MB-210-0500). Lane 2: rec. AKT1. Lane 3: rec. AKT2. Lane 4: rec. AKT3. Load: 50ng. Primary antibody: AKT antibody at 1:1000 for overnight at 4°C. Secondary antibody: Donkey anti-Sheep IgG HRP at 1:70,000 for 30min at room temperature. Block: MB-073 BlockOut Buffer overnight at 4°C. Predicted/Observed size: ~60 kDa for AKT.



Disclaimer

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