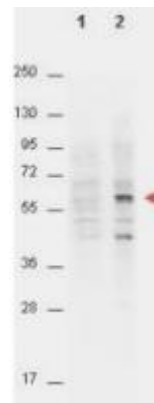


AM08433PU-N**Monoclonal Antibody to AKT1 / PKB pThr308 - Purified**

Alternate names:	Akt-1, C-AKT, Protein kinase B, RAC-PK-alpha, RAC-alpha serine/threonine-protein kinase
Quantity:	0.1 mg
Concentration:	1.48 mg/ml (by UV absorbance at 280 nm)
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 AKT1, 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 / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), SM20P (for use in rat samples), AM03095PU-N
Clone:	18F3.H11
Immunogen:	Synthetic peptide corresponding to residues surrounding Thr308 of Human AKT1 protein Genename: AKT1
Format:	State: Liquid purified IgG fraction from tissue culture supernatant Purification: Affinity Chromatography on Protein A Buffer System: 0.02M Potassium Phosphate, 0.15M Sodium Chloride, pH 7.2 Preservatives: 0.01% (w/v) Sodium Azide Stabilizers: None
Applications:	ELISA: 1/20,000. Western Blot: 1/500-1/3,000. Expect a band approximately 56 kDa in size corresponding to phosphorylated AKT protein by western blotting in the appropriate cell lysate or extract. Immunohistochemistry: 20 µg/ml. Use formalin-fixed paraffin-embedded sections. Immunoprecipitation. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

- Specificity:** This antibody is specific for Human and Mouse AKT protein phosphorylated at Thr308.
This phospho-specific monoclonal antibody reacts with human and mouse AKT pThr308 and shows minimal reactivity by ELISA against the non-phosphorylated form of the immunizing peptide.
A BLAST analysis was used to suggest cross-reactivity with AKT pThr308 from most vertebrate species sources based on 100% homology with the immunizing sequence. Cross-reactivity with AKT from other sources has not been determined. Cross-reactivity with AKT2 and AKT3 will likely occur.
- Species Reactivity:** **Tested:** Human, Mouse.
Expected from sequence similarity: Monkey, Rat.
- Storage:** Upon receipt, store undiluted (in aliquots) at -20°C.
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.
 3. Jones PF, Jakubowicz T, Pitossi FJ, Maurer F, Hemmings BA. Molecular cloning and identification of a serine/threonine protein kinase of the second-messenger subfamily. *Proc Natl Acad Sci U S A.* 1991 May 15;88(10):4171-5. PubMed PMID: 1851997.
 4. Staal SP. Molecular cloning of the akt oncogene and its human homologues AKT1 and AKT2: amplification of AKT1 in a primary human gastric adenocarcinoma. *Proc Natl Acad Sci U S A.* 1987 Jul;84(14):5034-7. PubMed PMID: 3037531.
- Pictures:** WB of Mouse anti-AKT pT308 antibody.
Lane 1: non-phosphorylated AKT in untreated cells . Lane 2: phosphorylated AKT on PDGF stimulated NIH/3T3 cell lysates . Load: 15 µg per lane. Primary antibody: AKT pT308 antibody at a 1:4,000 dilution. Secondary antibody: peroxidase conjugated Gt-a-Mouse IgG (Fc) (p/n 610-1303) was used at a 1:40,000 dilution for 1 h at 4° C. Block: 3% BSA (p/n BSA-30) in TBS for 30 min at RT.



IHC of Mouse anti-AKT pT308 antibody.
Tissue: human brain cerebellum tissue (40X). Fixation: formalin fixed paraffin embedded. Primary antibody: AKT pT308 antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: staining of Purkinje neurons and cell processes in the cerebellum, cytosolic as well as occasionally nuclear. Staining: AKT pT308 as precipitated red signal with hematoxylin purple nuclear counterstain.

