



## Anti-AKT pT308 (MOUSE) Monoclonal Antibody - 200-301-269

**Code:** 200-301-269

**Size:** 100 µg

**Product Description:** Anti-AKT pT308 (MOUSE) Monoclonal Antibody - 200-301-269

**Concentration:** 1.0 mg/mL by UV absorbance at 280 nm

**PhysicalState:** Liquid (sterile filtered)

<b>Label</b>	Unconjugated
<b>Host</b>	Mouse
<b>Gene Name</b>	AKT1
<b>Species Reactivity</b>	human, mouse, rat, monkey
<b>Buffer</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Stabilizer</b>	None
<b>Preservative</b>	0.01% (w/v) Sodium Azide
<b>Storage Condition</b>	Store Anti-AKT pT308 antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
<b>Synonyms</b>	mouse anti-AKT pT308 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
<b>Application Note</b>	Anti-AKT pT308 antibody is suitable for ELISA, immunohistochemistry, immunoprecipitation and western blotting. Expect a band approximately 56 kDa in size corresponding to phosphorylated AKT protein by western blotting in the appropriate cell lysate or extract. This phospho-specific monoclonal antibody reacts with human and mouse AKT pT308 and shows minimal reactivity by ELISA against the non-phosphorylated form of the immunizing peptide. Specific conditions for reactivity should be optimized by the end user. Use formalin-fixed paraffin-embedded sections for immunohistochemistry. No pre-treatment of sample is required.
<b>Background</b>	Akt1 pT308 antibody detects phosphorylated Akt. AKT is involved in cellular survival pathways, by inhibiting apoptotic processes. Akt is also able to induce protein synthesis pathways, and is therefore a key signaling protein in the cellular pathways that lead to skeletal muscle hypertrophy, and general tissue growth. 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 with 3 isoforms known as AKT1, AKT2, AKT3. AKT is 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 pT308 monoclonal antibody is ideal for investigators involved in Cancer, Cell Signaling, Neuroscience, Signal Transduction research.
<b>Purity And Specificity</b>	Anti-AKT pT308 antibody was purified from concentrated tissue culture supernate by Protein A chromatography. This antibody is specific for human and mouse AKT protein phosphorylated at T308. A BLAST analysis was used to suggest cross-reactivity with AKT pT308 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.
<b>Assay Dilutions</b>	User Optimized
<b>ELISA</b>	1:20,000
<b>Western Blot</b>	1:500 - 1:3,000
<b>Immunohistochemistry</b>	20 µg/ml
<b>Flow Cytometry</b>	User Optimized
<b>Other Assays</b>	User Optimized
<b>Expiration</b>	Expiration date is one (1) year from date of opening.
<b>Immunogen</b>	Anti-AKT pT308 monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding T308 of human AKT1 protein.

## 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. Jones, P.F., Jakubowicz, T., Pitossi, F.J., Maurer, F. and Hemmings, B.A. (1991) Molecular cloning and identification of a serine/threonine protein kinase of the second-messenger subfamily. *Proc. Natl. Acad. Sci. U.S.A.* 88 (10), 4171-4175.

## Related Products

000-000-401	AKT CONTROL PEPTIDE - 000-000-401
200-301-401	Anti-AKT (MOUSE) Monoclonal Antibody - 200-301-401
200-341-269	Anti-AKT pT308 (MOUSE) Monoclonal Antibody DyLight™ 488 Conjugated - 200-341-269
610-103-121	Anti-MOUSE IgG (H&L) (GOAT) Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Rb Rt & Sh Serum Proteins) - 610-103-121

## Related Links

NCBI - 62241011

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

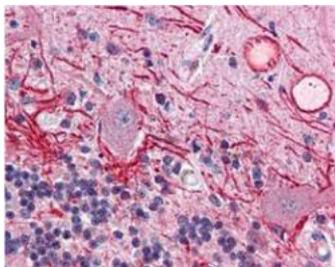
UniProtKB - P31749

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

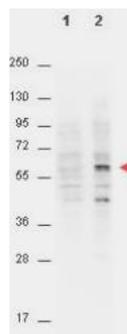
GenElD - 207

## Images

- 1 Immunohistochemistry of Mouse anti-AKT pT308 antibody. Tissue: human brain cerebellum tissue (40X). Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. 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.



- 2 Western Blot 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 in TBS with 3% BSA, for 3 h at 4° C. 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. Predicted/Observed size: (indicated by arrowhead at ~56 kDa). Other band(s): unspecific.



## Disclaimer

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