

Rabbit AKT1-T450 Antibody | anti-AKT1 antibody

Phospho-AKT1-T450 Polyclonal Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA36692	Rabbit	Human, Mouse, Rat	Immunofluorescence, Immunohistochemistry, Western Blot

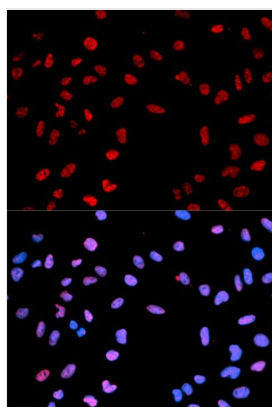
PRODUCT SYNONYMS

AKT1-T450; Phospho-AKT1-T450 Polyclonal Antibody; Phospho-AKT1-T450: AKT; AKT1; Proto oncogene c Akt; RAC PK alpha; PKB; PKB ALPHA; anti-AKT1 antibody

PRODUCT SPECIFICATIONS

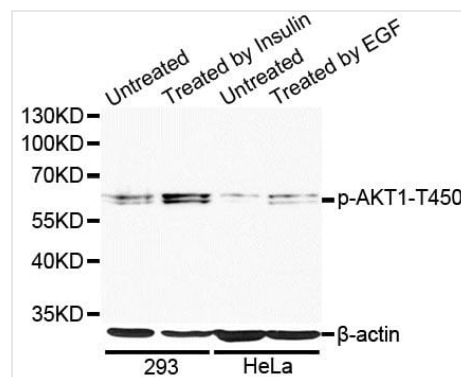
Host	Rabbit
Reactivity	Human, Mouse, Rat
Isotype	IgG
Purity/Purification	Affinity Purification
Concentration	1mg/ml (varies by lot)
Sequence Length	480
Applicable Applications for anti-AKT1 antibody	IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Species	Human
Route	Synthetic Peptide
Immunogen	A phospho specific peptide corresponding to residues surrounding T450 of human AKT1
Calculated Molecular Weight	56kDa
Preparation and Storage	Store at -20 degree C (regular) or -80 degree C (long term). Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

IMAGES



IF (Immunofluorescence)

Immunofluorescence analysis of MCF-7 cells using Phospho-AKT1-T450 antibody. Blue: DAPI for nuclear staining.



WB (Western Blot)

Western blot analysis of extracts of 293 and HeLa cells, using Phospho-AKT1-T450 antibody at 1:1000 dilution. 293 cells were treated by Insulin (100nM) for 10 minutes after serum-starvation overnight. HeLa cells were treated by EGF (100ng/ml) for 30 minutes after serum-starvation overnight. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% BSA. Detection: ECL Basic Kit. Exposure time: 1min.

ADDITIONAL INFORMATION

Related Product Information for anti-AKT1 antibody	Akt, also referred to as PKB or Rac, plays a critical role in controlling survival and apoptosis (1-3). This protein kinase is activated by insulin and various growth and survival factors to function in a wortmannin-sensitive pathway involving PI3 kinase (2,3). Akt is activated by phospholipid binding and activation loop phosphorylation at Thr308 by PDK1 (4) and by phosphorylation within the carboxy terminus at Ser473. The previously elusive PDK2 responsible for phosphorylation of Akt at Ser473 has been identified as mammalian target of rapamycin (mTOR) in a rapamycin-insensitive complex with rictor and Sin1 (5,6). Akt promotes cell survival by inhibiting apoptosis through phosphorylation and inactivation of several targets, including Bad (7), forkhead transcription factors (8), c-Raf (9), and caspase-9. PTEN phosphatase is a major negative regulator of the PI3 kinase/Akt signaling pathway (10). LY294002 is a specific PI3 kinase inhibitor (11). Another essential Akt function is the regulation of glycogen synthesis through phosphorylation and inactivation of GSK-3alpha and beta (12,13). Akt may also play a role in insulin stimulation of glucose transport (12). In addition to its role in survival and glycogen synthesis, Akt is involved in cell cycle regulation by preventing GSK-3beta-mediated phosphorylation and degradation of cyclin D1 (14) and by negatively regulating the cyclin dependent kinase inhibitors p27 Kip (15) and p21 Waf1/CIP1 (16). Akt also plays a critical role in cell growth by directly phosphorylating mTOR in a rapamycin-sensitive complex containing raptor (17). More importantly, Akt phosphorylates and inactivates tuberlin (TSC2), an inhibitor of mTOR within the mTOR-raptor complex (18,19).
Product Categories/Family for anti-AKT1 antibody	Phosphorylation

NCBI AND UNIPROT INFORMATION

NCBI GI #	60391226
NCBI GeneID	207
UniProt Accession #	P31749; Q9BWB6; B2RAM5; B7Z5R1
Molecular Weight	480
NCBI Official Full Name	RAC-alpha serine/threonine-protein kinase
NCBI Official Synonym Full Names	v-akt murine thymoma viral oncogene homolog 1
NCBI Official Symbol	AKT1
NCBI Official Synonym Symbols	AKT; PKB; RAC; CWS6; PRKBA; PKB-ALPHA; RAC-ALPHA
NCBI Protein Information	RAC-alpha serine/threonine-protein kinase; AKT1m; PKB alpha; RAC-PK-alpha; proto-oncogene c-Akt; protein kinase B alpha; rac protein kinase alpha
UniProt Protein Name	RAC-alpha serine/threonine-protein kinase
UniProt Gene Name	AKT1
UniProt Synonym Gene Names	PKB; RAC; PKB; PKB alpha
UniProt Entry Name	AKT1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.