OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA392495M

Phospho Akt (Ser473) Rabbit Polyclonal Antibody

Product data:

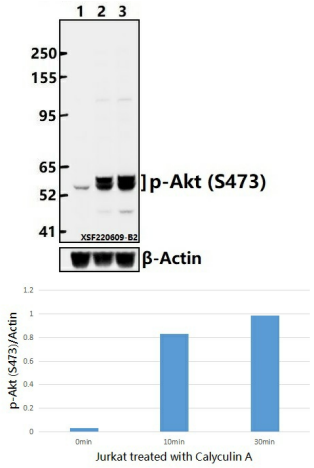
Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:2000~1:5000
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic phosphopeptide derived from human Akt around the phosphorylation site of Serine 473.
Specificity:	Akt (Phospho-S473) polyclonal antibody detects endogenous levels of Akt protein only when phosphorylated at Ser473.
Formulation:	Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2.
Concentration:	1mg/ml
Conjugation:	Unconjugated
Storage:	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.
Stability:	1 year
Predicted Protein Size:	~ 56 kDa
Database Link:	P31751, Q9Y243, P31749

Background: Akt, also referred to as PKB or Rac, plays a critical role in controlling survival and apoptosis. This protein kinase is activated by insulin and various growth and survival factors to function in a wortmannin-sensitive pathway involving PI3 kinase. Akt is activated by phospholipid binding and activation loop phosphorylation at Thr308 by PDK1 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. Akt promotes cell survival by inhibiting apoptosis through phosphorylation and inactivation of several targets, including Bad, forkhead transcription factors, c-Raf, and caspase-9. PTEN phosphatase is a major negative regulator of the PI3 kinase/Akt signaling pathway. LY294002 is a specific PI3 kinase inhibitor. Another essential Akt function is the regulation of glycogen synthesis through phosphorylation and inactivation of GSK-3α and β. Akt may also play a role in insulin stimulation of glucose transport. In addition to its role in survival and glycogen synthesis, Akt is involved in cell cycle regulation by preventing GSK-3β-mediated phosphorylation and degradation of cyclin D1 and by negatively regulating the cyclin dependent kinase inhibitors p27 Kip1 and p21 Waf1/Cip1. Akt also plays a critical role in cell growth by directly phosphorylating mTOR in a rapamycin-sensitive complex containing raptor. More importantly, Akt phosphorylates and inactivates tuberin (TSC2), an inhibitor of mTOR within the mTOR-raptor complex.

Synonyms: AKT1; AKT2; AKT3; PKB; PKB alpha; PKB beta; PKBG; PKB gamma; Protein kinase Akt-2; Protein kinase Akt-3; Protein kinase B; Protein kinase B alpha; Protein kinase B beta; Protein kinase B gamma; Proto-oncogene c-Akt; RAC; RAC-alpha serine/threonine-protein kinase; RAC-beta serine/threonine-protein kinase; RAC-gamma serine/threonine-protein kinase; RAC-PK-alpha; RAC-PK-beta; RAC-PK-gamma; STK-2

Note: For research use only, not for use in diagnostic procedure.

Product images:



Western blot (WB) analysis of Akt (Phospho-S473) polyclonal antibody at 1:2000 dilution
Lane1:Jurkat whole cell lysate(40ug)
Lane2:Jurkat treated with Calyculin A(100 nM,10 minutes) whole cell lysate(40ug)
Lane3:Jurkat treated with Calyculin A(100 nM,30 minutes) whole cell lysate(40ug)