

## Product datasheet for **TA326829**

### AKT2 Rabbit Polyclonal Antibody

#### Product data:

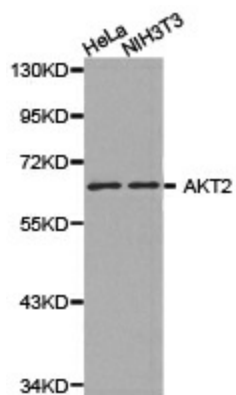
Product Type:	Primary Antibodies
Applications:	ICC/IF, WB
Recommended Dilution:	WB: 1:500-1:2000
Reactivity:	Human, Mouse
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide of human AKT2
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	AKT serine/threonine kinase 2
Database Link:	<a href="#">NP_001617</a> <a href="#">Entrez Gene 11652 Mouse</a> <a href="#">Entrez Gene 208 Human</a> <a href="#">P31751</a>



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<b>Background:</b>	<p>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-3<math>\alpha</math> and <math>\beta</math>. 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-3<math>\beta</math>-mediated phosphorylation and degradation of cyclin D1 and by negatively regulating the cyclin dependent kinase inhibitors p27 Kip 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.</p>
<b>Synonyms:</b>	HIHGHH; PKBB; PKBBETA; PRKBB; RAC-BETA
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Protein Kinase
<b>Protein Pathways:</b>	Acute myeloid leukemia, Adipocytokine signaling pathway, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Glioma, Insulin signaling pathway, Jak-STAT signaling pathway, MAPK signaling pathway, Melanoma, mTOR signaling pathway, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Renal cell carcinoma, Small cell lung cancer, T cell receptor signaling pathway, Tight junction, Toll-like receptor signaling pathway, VEGF signaling pathway

## Product images:



Western blot analysis of extracts of various cell lines, using AKT2 antibody.