

Product datasheet for **R1467**

AKT2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	This antibody was tested by ELISA and Immunoblotting and was found to be reactive with both unphosphorylated and phosphorylated AKT2 in a lysate of HEK293 cells. Although not tested, this antibody is likely functional in Immunohistochemistry and Immunoprecipitation. <u>Recommended Dilution(s)</u> : This product has been assayed by immunoblot against a HEK293 cell lysate and is reactive at a 1:1,000 dilution showing a band at approximately 60 kDa. A working dilution of 1:4,000 to 1:16,000 is suggested for this product in a standard capture ELISA using TMB (3,3',5,5'-Tetramethylbenzidine) code # TMBE-100 as a substrate for 30 minutes at room temperature against 0.1 ug of the immunizing peptide.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide of human AKT2 conjugated to Keyhole Limpet Hemocyanin (KLH).
Specificity:	This affinity purified antibody is directed against human AKT2. The antibody detects both unphosphorylated and phosphorylated forms of the protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Cross reactivity with AKT2 from other species has not been determined, however, the sequence of the immunogen shows 85% identity to mouse and 92% identity with rat, therefore, cross reactivity is expected.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 , with 0.01% Sodium Azide as preservative. State: Aff - Purified State: Liquid purified IgG fraction.
Concentration:	lot specific
Purification:	Immunoaffinity purification.
Conjugation:	Unconjugated



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Storage:	<p>Store vial at -20°C prior to opening.</p> <p>Centrifuge product if not completely clear after standing at room temperature. For extended storage aliquot contents and freeze at -20°C or below.</p> <p>Dilute only prior to immediate use.</p> <p>Avoid repeated freezing and thawing.</p>
Stability:	Shelf life: one year from despatch.
Gene Name:	AKT serine/threonine kinase 2
Database Link:	Entrez Gene 208 Human P31751
Background:	<p>AKT2 is also known as V-AKT Murine Thymoma Viral Oncogene Homolog 2 antibody, Rac protein kinase beta antibody, PKB beta antibody or PRKBB antibody. AKT2 is an isoform of the phosphoinositidedependent serine-threonine protein kinase AKT and is enriched in insulin-responsive tissues and has been implicated in the metabolic actions of the hormone. AKT2 is a putative oncogene encoding a protein belonging to a subfamily of serine/threonine kinases containing SH2-like (Src homology 2- like) domains. Furthermore, AKT2 was shown to be amplified and overexpressed in 2 of 8 ovarian carcinoma cell lines and 2 of 15 primary ovarian tumors. Overexpression of AKT2 contributes to the malignant phenotype of a subset of human ductal pancreatic cancers. AKT2 is a general protein kinase capable of phosphorylating several known proteins. AKT2 mediates many of the downstream events of PI 3-kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI 3-kinase recruits AKT2 to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT2 dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT2 has two main roles: (i) inhibition of apoptosis; (ii) promotion of proliferation.</p>
Synonyms:	RAC-PK-beta, Protein kinase Akt-2, Protein kinase B beta

Product images:

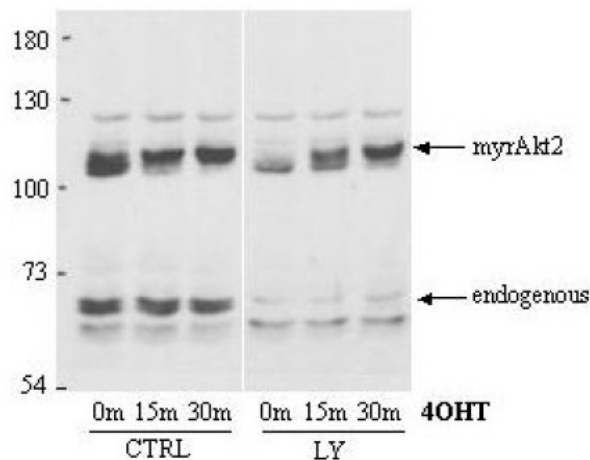


Figure 1. Immunoblotting. Affinity Purified antibody to AKT2 was used at a 1:1,000 dilution to detect AKT2 by Western blot. A lysate from a stable HEK293 cell line expressing an inducible, myristoylated form of Akt2 (MyrAkt2-ER) was loaded for SDSPAGE, separated and then transferred to nitrocellulose. The blot was reacted with primary antibody for 1h at room temperature. In response to 4OHT (tamoxifen), the Akt2 is recruited to the plasma membrane via its myristoylation sequence and becomes phosphorylated and activated. The blot (right panel) shows 0 m, 15 m, and 30 m of 4OHT treatment. This treatment has no effect on endogenous Akt2, but causes a band shift upwards in the MyrAkt2. Endogenous Akt2 runs at about 60kDa whereas the myristoylated construct runs at around 110 kDa.

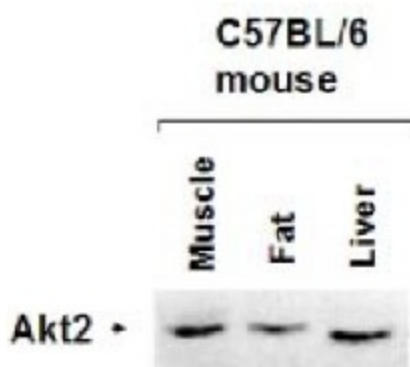


Figure 2. Immunoblotting. Affinity Purified antibody to AKT2 was used at a 1:1,000 dilution to detect AKT2 by Western blot in lysates from mouse tissues. The antibody is shown to react with mouse Akt2 in mouse liver, skeletal muscle and fat using standard immunoblotting methods.

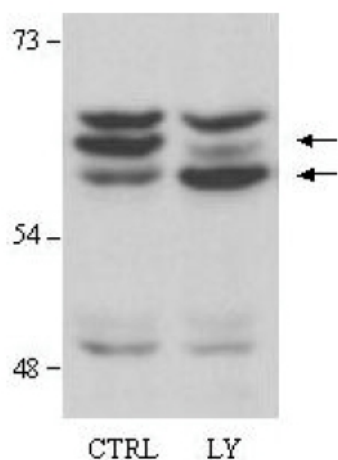


Figure 3. Immunoblotting. Antibody to AKT2 detects both unphosphorylated and phosphorylated AKT2. As before approximately 20 mg/lane of crude HEK293 lysate was loaded for SDS-PAGE, separated and then transferred to nitrocellulose. The right lane contains lysate pretreated for 15 min with 25 uM [LY294002] which affects the phosphorylation of endogenous Akt2 but has no effect on phosphorylation of the myristoylated construct. This antibody clearly detects both the phosphorylated (top arrow) and the non-phosphorylated (bottom arrow) forms of endogenous Akt2.