

Datasheet for 600-401-425**AKT2 Antibody****Overview**

Description:	Anti-AKT2 (RABBIT) Antibody - 600-401-425
Item No.:	600-401-425
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background: 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 phosphoinositide-dependent 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. Over-expression 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.

Synonyms:	rabbit anti-AKT2 antibody, AKT 2, AKT-2, PKB antibody, PKB beta antibody, PKBBETA antibody, PRKBB antibody, Protein kinase Akt 2 antibody, Protein kinase B beta antibody, RAC-beta serine/threonine-protein kinase, RAC-PK-beta
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	AKT2
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to C-Terminal region near aa 450-475 (of 481) of human AKT2 conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/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.
Relevant Links:	• NCBI - NP_001317440.1 • UniProtKB - P31751 • GenelD - 208 • GenelD - 164731

Application Details

Tested Applications:	ELISA, WB
Application Note:	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. 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. Researchers should determine optimal titers for other applications.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4000 - 1:16000
FC:	User Optimized
WB:	1:1000

Formulation

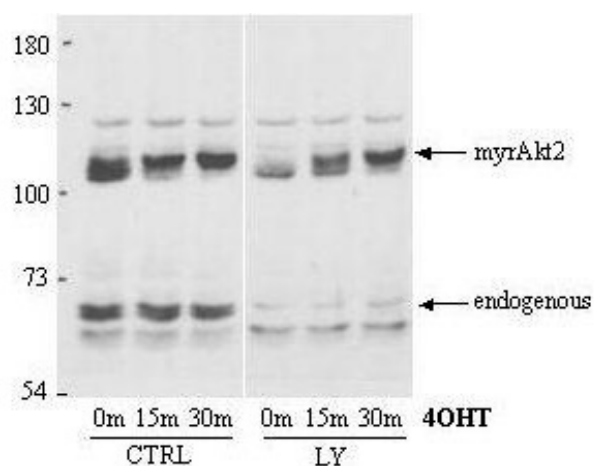
Physical State:	Liquid (sterile filtered)
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Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

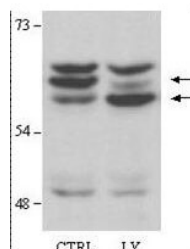
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



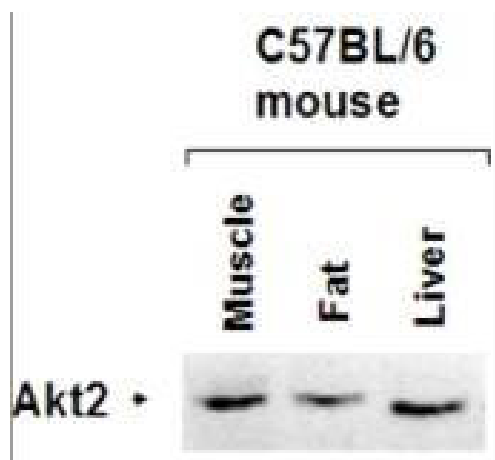
Western Blot

Western Blot of Rabbit Anti-AKT2 antibody. Load: 20mg/lane. Lane 1: HEK293 lysate [Control]. Lane 2: HEK293 lysate + 15 min 4OHT (tamoxifen). Lane 3: HEK293 lysate + 30 min 4OHT (tamoxifen). Lane 4: HEK293 lysate pretreated for 15min with 25uM LY294002. Lane 5: HEK293 lysate + 15 min 4OHT (tamoxifen) lysate pretreated for 15min with 25uM LY294002. Lane 6: HEK293 lysate + 30 min 4OHT (tamoxifen) lysate pretreated for 15min with 25uM LY294002. Primary antibody: Anti-AKT2 Antibody at 1:1000 for 1h at room temperature. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Observed size: Endogenous Akt2 ~60kDa, myristoylated construct ~110kDa. Other band(s): This treatment has no effect on endogenous Akt2, but causes a band shift upwards in the MyrAkt2.



Western Blot

Western Blot of Rabbit anti-AKT2 antibody. Lane 1: HEK293 lysate [control]. Lane 2: HEK293 lysate pretreated for 15min with 25uM LY294002. Load: 20mg/lane. Primary antibody: AKT2 antibody at 1:400 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed: phosphorylated (top arrow) and the non-phosphorylated (bottom arrow) forms of endogenous Akt2. Other band(s): nonspecific.



Western Blot

Western Blot of Rabbit anti-AKT2 antibody. Lane 1: mouse skeletal muscle tissue lysates. Lane 2: mouse fat tissue lysates. Lane 3: mouse liver tissue lysates. Load: 35 µg per lane. Primary antibody: AKT2 antibody at 1:1,000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.