

PRODUCT INFORMATION

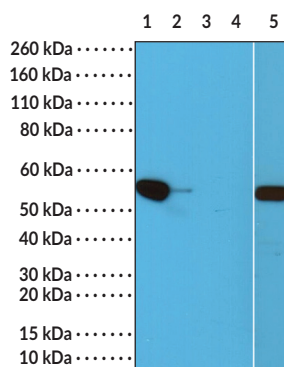


Akt1^{E17K}/Akt2^{E17K} Rabbit Monoclonal Antibody (Clone RM336) Item No. 32189

Overview and Properties

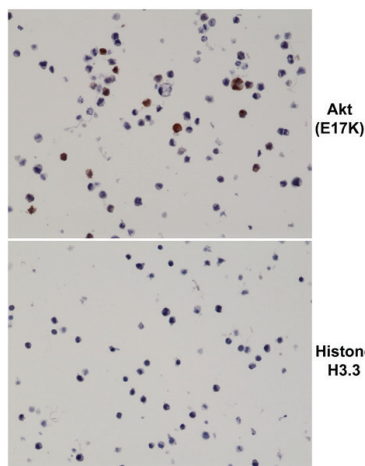
Contents:	This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
Synonyms:	PKB α ^{E17K} , PKB β ^{E17K}
Immunogen:	Peptide corresponding to Akt1 ^{E17K} /Akt2 ^{E17K}
Cross Reactivity:	(+) Akt1 ^{E17K} , Akt2 ^{E17K} ; (-) Wild-type Akt
Species Reactivity:	Species independent
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM336
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, Immunohistochemistry (IHC), and Western blot (WB); the recommended starting concentration is 0.05-0.5, 0.2-1, and 0.1-0.5 µg/ml for ELISA, IHC, and WB, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Akt1^{E17K}/Akt2^{E17K} 293T cell lysates (8%)
Lane 2: Akt1^{E17K}/Akt2^{E17K} 293T cell lysates (2%)
Lane 3: Akt1^{E17K}/Akt2^{E17K} 293T cell lysates (0.5%)
Lane 4: Akt1^{E17K}/Akt2^{E17K} 293T cell lysates (0%)
Lane 5: Akt1 293T cell lysates (100%)

WB of a cell lysate mixture of untransfected 293T cells and 293T cells transfected with a DNA construct encoding the Akt^{E17K} mutant, using Akt1^{E17K}/Akt2^{E17K} Rabbit Monoclonal Antibody (Clone RM336) at a concentration of 0.1 µg/ml or Akt1 (C-Term) Rabbit Monoclonal Antibody.



Immunohistochemical staining of formalin-fixed and paraffin-embedded 293T cells transfected with a DNA construct encoding the Akt1^{E17K}/Akt2^{E17K} mutation or Histone H3.3, stained with Akt1^{E17K}/Akt2^{E17K} Rabbit Monoclonal Antibody (Clone RM336) at a concentration of 0.2 µg/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Akt1 and Akt2, also known as protein kinase Ba (PKBa) and PKB β , respectively, are serine/threonine kinase belonging to the AGC kinase family and two of three Akt isoforms in mammals.^{1,2} Akt kinases function downstream of activated tyrosine kinases and PI3K to regulate a variety of cellular processes, including cell size, growth, proliferation, and survival, as well as genome stability, glucose metabolism, and neovascularization.² They are comprised of an N-terminal pleckstrin homology (PH) domain, which binds to phosphatidylinositol-(3,4,5)-triphosphate (PIP₃) and phosphatidylinositol-(3,4)-diphosphate (PIP₂), a kinase domain, and a C-terminal regulatory hydrophobic motif. Akt1 and Akt2 are ubiquitously expressed and are the primary isoforms in endothelial cells and insulin-responsive tissues, respectively.³ Akt1^{E17K} is an activating mutation that has been found in tumor tissue isolated from patients with breast, colorectal, or ovarian cancer.⁴ Akt2^{E17K} mutations have been found in patients with hypoglycemia.⁵ Cayman's Akt1^{E17K}/Akt2^{E17K} Rabbit Monoclonal Antibody (Clone RM336) can be used for ELISA, immunohistochemistry (IHC), and Western blot (WB) applications.

References

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3. Manning, B.D. and Cantley, L.C. AKT/PKB signaling: Navigating downstream. *Cell* **129**(7), 1261-1274 (2007).
4. Carpten, J.D., Faber, A.L., Horn, C., *et al.* A transforming mutation in the pleckstrin homology domain of AKT1 in cancer. *Nature* **448**(7152), 439-444 (2007).
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