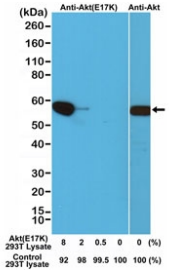
AKT E17K Mutant Antibody / Oncogenic Activation and Membrane Localization Marker Antibody [clone RM336] (R20360)

Catalog No.	Formulation	Size
R20360-50UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	50 ug

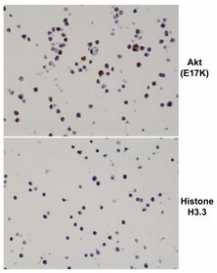
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM336
Purity	Protein A purified from animal origin-free supernatant
UniProt	P31749
Applications	Western Blot : 0.1ug/ml-0.5ug/ml ELISA : 0.05ug/ml-0.5ug/ml Immunohistochemistry (FFPE) : 0.2-1ug/ml
Limitations	This AKT E17K Mutant Antibody / Oncogenic Activation and Membrane Localization Marker Antibody is available for research use only.



AKT E17K Mutant Antibody HEK293T WB. Western blot analysis of mixed human 293T cell lysates containing untransfected cells and cells transfected with an AKT E17K expression construct shows a band at approximately 55-60 kDa selectively detected in E17K-expressing samples using AKT E17K mutant antibody, consistent with the predicted molecular weight of AKT and supporting mutation-specific recognition, while total AKT antibody detects both wild-type and mutant protein; clone RM336 was used for detection of the E17K variant.



AKT E17K Mutant Antibody Cell Pellet IHC. Immunohistochemistry of FFPE human 293T cell pellets transfected with an AKT E17K expression construct shows distinct HRP-DAB brown cytoplasmic and nuclear staining in E17K-expressing cells, while control cells expressing Histone H3.3 show minimal background, supporting mutation-specific detection of the AKT E17K variant; clone RM336 was used for staining.

Description

AKT, also known as Protein kinase B (AKT), is a central serine-threonine kinase that regulates cell survival, metabolism, proliferation, and growth through the PI3K-AKT signaling pathway. Activation of AKT normally requires phosphoinositide 3-kinase-mediated generation of phosphatidylinositol 3,4,5-trisphosphate (PIP3), which recruits AKT to the plasma membrane via its pleckstrin homology (PH) domain. This membrane recruitment enables phosphorylation at key regulatory residues, leading to full kinase activation and downstream signaling. AKT proteins are broadly expressed across tissues and are essential for maintaining cellular homeostasis.

AKT antibody, also referred to as Protein kinase B antibody and PKB antibody in the literature, can be used to study both total and mutant forms of the protein involved in signaling regulation. The E17K mutation is a well-characterized substitution within the PH domain of AKT that alters lipid binding specificity and enhances membrane association. This mutation enables AKT to localize to the plasma membrane independently of normal PI3K signaling, resulting in constitutive kinase activation. As a result, the E17K variant represents a gain-of-function mutation that disrupts normal regulatory control of AKT signaling.

This AKT E17K Mutant Antibody / Oncogenic Activation and Membrane Localization Marker Antibody (clone RM336) is uniquely positioned for research focused on mutation-driven signaling and cancer biology. The AKT E17K mutation has been identified in multiple tumor types, including breast, colorectal, and endometrial cancers, where it contributes to persistent activation of survival and growth pathways. Constitutive activation of AKT through this mutation promotes resistance to apoptosis, enhances proliferative signaling, and supports tumor progression. Detection of the E17K mutant form of AKT therefore provides important insight into oncogenic signaling mechanisms and mutation-specific pathway dysregulation.

In cellular and tissue-based studies, the E17K mutant form of AKT is often associated with increased membrane localization and altered subcellular distribution compared to wild-type protein. This shift reflects the mutationÃ¢Â€Â™s impact on PH domain-mediated lipid interactions and highlights the importance of spatial regulation in AKT signaling. In tumor tissues, detection of AKT E17K can reveal aberrant activation patterns and support studies of targeted therapeutic strategies aimed at inhibiting PI3K-AKT pathway components.

Clone RM336 is a recombinant rabbit monoclonal antibody designed to recognize the AKT E17K mutant protein, enabling selective detection of this oncogenic variant in research applications. An AKT E17K antibody is suitable for detecting mutant AKT expression in studies of cancer signaling, pathway activation, and mutation-specific cellular responses.

For a microarray-validated AKT1 antibody supporting high-specificity detection, see our AKT1 antibody (clone AKT1/2552).

Application Notes

The stated application concentrations are suggested starting points. Titration of the AKT E17K Mutant Antibody / Oncogenic Activation and Membrane Localization Marker Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the Akt E17K Mutant was used as the immunogen for the recombinant AKT E17K Mutant antibody.

Storage

Store the AKT E17K Mutant antibody at -20oC.

Alternate Names

AKT E17K antibody, AKT1 E17K mutant antibody, Protein kinase B E17K antibody, PKB E17K antibody, AKT oncogenic mutant antibody

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