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AKT1S1 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM2018b

Specification

AKT1S1 Antibody - Product Information

Application	**WB,E**
Primary Accession	O96B36
Other Accession	NP_001092102.1
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**

AKT1S1 Antibody - Additional Information

Gene ID 84335

Other Names
Proline-rich AKT1 substrate 1, 40 kDa proline-rich AKT substrate, AKT1S1 {ECO:0000312|EMBL:AAH160431}

Target/Specificity
Purified His-tagged AKT1S1 protein(Fragment) was used to produced this monoclonal antibody.

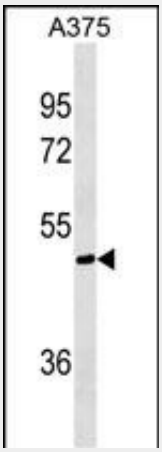
Dilution
WB~~1:100

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
AKT1S1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

AKT1S1 Antibody - Protein Information



AKT1S1 Antibody (Cat. #AM2018b) western blot analysis in A375 cell line lysates (35µg/lane).This demonstrates the AKT1S1 antibody detected the AKT1S1 protein (arrow).

AKT1S1 Antibody - Background

AKT1S1 is a proline-rich substrate of AKT (MIM 164730)
that binds 14-3-3 protein (see YWHAH, MIM 113508) when
phosphorylated (Kovacina et al., 2003 [PubMed 12524439]).[supplied
by OMIM].

AKT1S1 Antibody - References

Wang, L., et al. J. Biol. Chem. 283(23):15619-15627(2008)
Fonseca, B.D., et al. Biochem. J. 411(1):141-149(2008)
Fonseca, B.D., et al. J. Biol. Chem. 282(34):24514-24524(2007)
Wang, L., et al. J. Biol. Chem. 282(27):20036-20044(2007)
Sancak, Y., et al. Mol. Cell 25(6):903-915(2007)

Name AKT1S1
{ECO:0000312|EMBL:AAH16043.1}

Function
Subunit of mTORC1, which regulates cell growth and survival in response to nutrient and hormonal signals. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1- TSC2, which leads to the activation of the RHEB GTPase that potently activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eiF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Within mTORC1, AKT1S1 negatively regulates mTOR activity in a manner that is dependent on its phosphorylation state and binding to 14-3-3 proteins. Inhibits RHEB-GTP-dependent mTORC1 activation. Substrate for AKT1 phosphorylation, but can also be activated by AKT1- independent mechanisms. May also play a role in nerve growth factor- mediated neuroprotection.

Cellular Location
Cytoplasm, cytosol. Note=Found in the cytosolic fraction of the brain.

Tissue Location
Widely expressed with highest levels of expression in liver and heart. Expressed at higher levels in cancer cell lines (e.g. A-549 and HeLa) than in normal cell lines (e.g. HEK293)

AKT1S1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides

- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture