Product Name: AKT1S1 Mouse Monoclonal Antibody
Catalog #: AMM86109

Summary

Production Name	AKT1S1 Mouse Monoclonal Antibody
Description	Mouse Monoclonal Antibody
Host	Mouse
Application	WB
Reactivity	Human, Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG1
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Purified antibody in TBS with 0.05% sodium azide.
Purification	Affinity Purification

Immunogen

Gene Name	AKT1S1
Alternative Names	Proline-rich AKT1 substrate 1, 40 kDa proline-rich AKT substrate, AKT1S1 {ECO:0000312|EMBL:AAH16043.1}
Gene ID	84335.0
SwissProt ID	Q96B36. This AKT1S1 antibody is generated from a mouse immunized with a recombinant protein from the human region of human AKT1S1.

Application

Dilution Ratio	WB:1:500-1:4000
Molecular Weight	27.4kDa

Background

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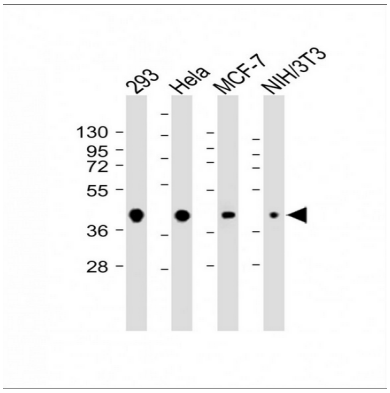
Subunit of mTORC1, which regulates cell growth and survival in response to nutrient and hormonal signals. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1-TSC2, which leads to the activation of 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.

Research Area

mTOR signaling pathway

Image Data



All lanes : Anti-AKT1S1 Antibody at 1:500-1:4000 dilution

Note

For research use only.