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AKT1S1 Antibody
Catalog # ASC11670

Specification

AKT1S1 Antibody - Product Information

Application	**IF**
Primary Accession	Q96B36
Other Accession	NP_115751, 84335
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 30 kDa** **Observed: 28 kDa KDa**
Application Notes	**AKT1S1 antibody can be used for detection of AKT1S1 by Western blot at 1 - 2 µg/mL.**

AKT1S1 Antibody - Additional Information

Gene ID **84335**

Target/Specificity
AKT1S1 antibody was raised against a 19 amino acid peptide near the carboxy terminus of human AKT1S1.

The immunogen is located within amino acids 190 - 240 of AKT1S1.

Reconstitution & Storage
AKT1S1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

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

AKT1S1 Antibody - Protein Information

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

Function
Negative regulator of the mechanistic target of rapamycin complex 1 (mTORC1), an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:17277771, PubMed:17386266, PubMed:17510057, PubMed:29236692). In absence of insulin and nutrients, AKT1S1 associates with the mTORC1 complex and directly inhibits mTORC1 activity by blocking the MTOR substrate- recruitment site (PubMed:29236692). In response to insulin and nutrients, AKT1S1 dissociates from mTORC1 (PubMed:17386266, PubMed:<a

href="http://www.uniprot.org/citations/18372248" target="_blank">18372248). Its activity is dependent on its phosphorylation state and binding to 14-3-3 (PubMed:16174443, PubMed:18372248). May also play a role in nerve growth factor-mediated neuroprotection (By similarity).

Cellular Location
Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q9D1F4}. Note=Found in the cytosolic fraction of the brain. {ECO:0000250|UniProtKB:Q9D1F4}

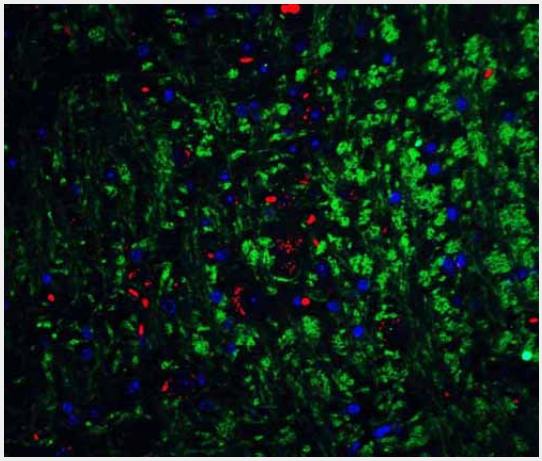
Tissue Location
Widely expressed with highest levels of expression in liver and heart. Expressed at higher levels in cancer cell lines (e.g. A-549 and HeLa) than in normal cell lines (e.g. HEK293)

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

AKT1S1 Antibody - Images



Immunofluorescence of Neurturin in mouse brain tissue with Neurturin Antibodyat 20 µg/mL.

AKT1S1 Antibody - Background

AKT1S1 Antibody: The Akt signaling pathway contributes to the regulation of apoptosis after a variety of cell death signals. AKT1S1, also known as PRAS40, is a proline-rich substrate of the kinase AKT1 and is thought to play a role in neuroprotection mediated by nerve growth factor (NGF) after transient focal cerebral ischemia (1). AKT1S1 is also a substrate and potential regulator of mammalian target of rapamycin (mTOR), a serine/threonine kinase that regulates cell growth and cell cycle, and a negative regulator of autophagy (2). Treatment with the insulin-like growth factor-1 (IGF1) can indusce the phosphorylation of AKT1S1 via the PI3K/AKT signaling pathway in PC12 cells

(3).

AKT1S1 Antibody - References

Saito A, Narasimhan P, Hayashi T, et al. Neuroprotective role of a proline-rich Akt substrate in apoptotic neuronal cell death after stroke: relationships with nerve growth factor. J. Neurosci. 2004; 24:1584-93.
Wiza C, Nascimento EB, and Ouwens DM. Role of PRAS40 in Akt and mTOR signaling in health and disease. Am. J. Physiol. Endocrinol. Metab. 2012; 302:E1453-60.
Wang H, Zhang Q, Zhang L, et al. Insulin-like growth factor-1 induces the phosphrylation of PRAS40 via the PI3K/Akt signaling pathway in PC12 cells. Neurosci. Lett. 516:105-9.