

**Anti-PRAS40 AKT1S1 Monoclonal Antibody**  
Catalog # ABO14471

**Specification**

**Anti-PRAS40 AKT1S1 Monoclonal Antibody - Product Information**

Application	WB, IP
Primary Accession	<a href="#">Q96B36</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-PRAS40 AKT1S1 Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human, Mouse, Rat.

**Anti-PRAS40 AKT1S1 Monoclonal Antibody - Additional Information**

Gene ID 84335

**Other Names**

Proline-rich AKT1 substrate 1, 40 kDa proline-rich AKT substrate, AKT1S1  
{ECO:0000312|EMBL:AAH16043.1}

**Application Details**

WB 1:500-1:2000<br>IP 1:50

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human PRAS40 Many growth factors and hormones induce the phosphoinositide 3-kinase signaling pathway, which results in the activation of downstream effector proteins such as the serine/threonine kinase Akt. One known Akt substrate is a 40 kDa, proline-rich protein (PRAS40) that binds to 14-3-3 protein. PRAS40 also binds mTOR to transduce Akt signals to the mTOR complex.

**Purification**

Affinity-chromatography

Storage

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

**Anti-PRAS40 AKT1S1 Monoclonal 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:<a href="http://www.uniprot.org/citations/17277771" target="\_blank">17277771</a>, PubMed:<a href="http://www.uniprot.org/citations/17386266" target="\_blank">17386266</a>, PubMed:<a href="http://www.uniprot.org/citations/17510057" target="\_blank">17510057</a>, PubMed:<a href="http://www.uniprot.org/citations/29236692" target="\_blank">29236692</a>). 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:<a href="http://www.uniprot.org/citations/29236692" target="\_blank">29236692</a>). In response to insulin and nutrients, AKT1S1 dissociates from mTORC1 (PubMed:<a href="http://www.uniprot.org/citations/17386266" target="\_blank">17386266</a>, PubMed:<a href="http://www.uniprot.org/citations/18372248" target="\_blank">18372248</a>). Its activity is dependent on its phosphorylation state and binding to 14-3-3 (PubMed:<a href="http://www.uniprot.org/citations/16174443" target="\_blank">16174443</a>, PubMed:<a href="http://www.uniprot.org/citations/18372248" target="\_blank">18372248</a>). 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

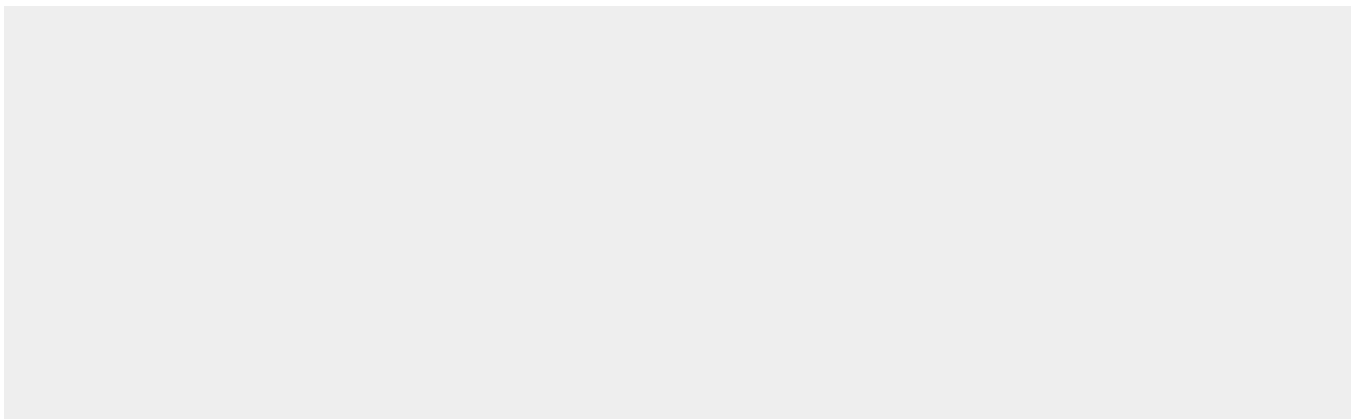
Widely expressed with highest levels of expression in liver and heart. Expressed at higher levels in cancer cell lines (e.g. A-549 and HeLa) than in normal cell lines (e.g. HEK293)

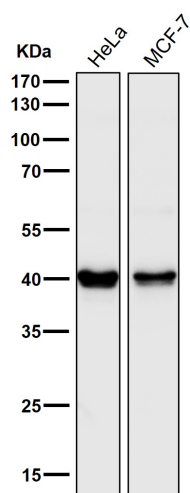
## Anti-PRAS40 AKT1S1 Monoclonal Antibody - Protocols

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

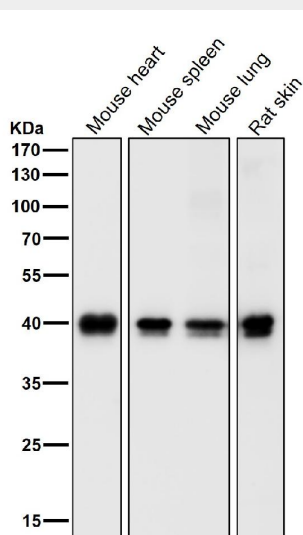
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-PRAS40 AKT1S1 Monoclonal Antibody - Images

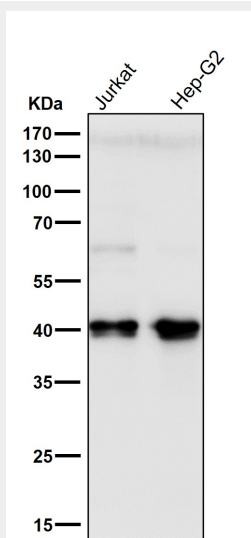




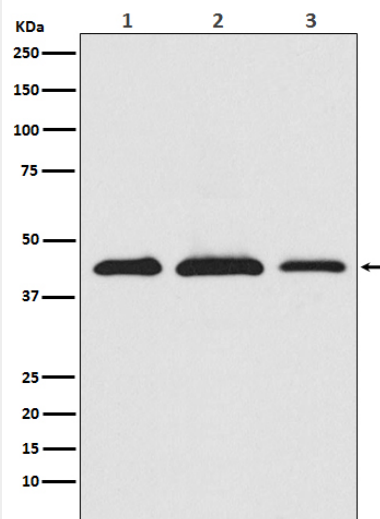
All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.



All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.



All lanes use the Antibody at 1:3K dilution for 1 hour at room temperature.



Western blot analysis of PRAS40 expression in (1) HeLa cell lysate; (2) RAW 264.7 cell lysate; (3) PC12 cell lysate.