

# PRAS40 Antibody

Rabbit mAb Catalog # AP91483

## **Product Information**

Application Primary Accession Reactivity	WB, IP <u>Q96B36</u> Rat, Human, Mouse
Clonality	Monoclonal
Other Names	40 kDa proline rich AKT substrate; AKT1 S1; Lobe; PRAS40; Proline rich akt substrate; Proline rich Akt substrate 40 kDa;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	27383

### **Additional Information**

Dilution Purification Immunogen Description	WB 1:500~1:2000 IP 1:50 Affinity-chromatography 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
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

#### **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: <u>17277771</u> , PubMed: <u>17386266</u> , PubMed: <u>17510057</u> , PubMed: <u>29236692</u> ). 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: <u>29236692</u> ). In response to insulin and nutrients, AKT1S1 dissociates from mTORC1 (PubMed: <u>17386266</u> , PubMed: <u>18372248</u> ). Its activity is dependent on its phosphorylation state and binding to 14-3-3 (PubMed: <u>16174443</u> , PubMed: <u>18372248</u> ). 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)

# Images



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

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