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AKT1S1 Rabbit pAb

Catalog # AP99402

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q96B36
Other Accession	Q96B36
Reactivity	Human
Predicted	Rat, Pig, Mouse, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	27383
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PRAS40
Epitope Specificity	161-256/256
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the ubiquitin-conjugating enzyme family.
SUBUNIT	Part of the mammalian target of rapamycin complex 1 (mTORC1) which contains MTOR, MLST8, RPTOR, AKT1S1/PRAS40 and DEPTOR. mTORC1 binds to and is inhibited by FKBP12-rapamycin. Interacts directly with RPTOR. The phosphorylated form interacts with 14-3-3 proteins.
Post-translational modifications	Phosphorylated by AKT1. Phosphorylation relieves inhibitory function on mTORC1.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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, Mar 2008]

Additional Information

Gene ID	84335
Other Names	Lobe; PRAS40; 1110012J22Rik; Lobel; AKTS1_HUMAN; AKT1S1; 40 kDa proline-rich AKT substrate; AKTS1_MOUSE; Proline-rich AKT substrate; Pras; AKT1 substrate 1; AKT1 substrate 1 (proline-rich); proline-rich Akt substrate, 40 kDa
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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: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)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.