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Phospho-rat TSC2(T1373) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3833a

Product Information

Application	DB, E
Primary Accession	P49816
Other Accession	NP_036812.2
Reactivity	Rat
Predicted	Mouse, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41276
Calculated MW	201278

Additional Information

Gene ID	24855
Other Names	Tuberin, Tuberous sclerosis 2 protein homolog, Tsc2
Target/Specificity	This rat TSC2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T1373 of rat TSC2.
Dilution	DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-rat TSC2(T1373) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Tsc2 {ECO:0000303|PubMed:8519695, ECO:0000312|RGD:3908}
Function	Catalytic component of the TSC-TBC complex, a multiprotein complex that acts as a negative regulator of the canonical mTORC1 complex, an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass

	generation and growth (PubMed:12172553). Within the TSC-TBC complex, TSC2 acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (By similarity). In absence of nutrients, the TSC-TBC complex inhibits mTORC1, thereby preventing phosphorylation of ribosomal protein S6 kinase (RPS6KB1 and RPS6KB2) and EIF4EBP1 (4E-BP1) by the mTORC1 signaling (By similarity). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (By similarity). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling (PubMed:16707451). Also stimulates the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 (PubMed:9045618).
Cellular Location	Lysosome membrane {ECO:0000250|UniProtKB:P49815}; Peripheral membrane protein {ECO:0000250|UniProtKB:P49815}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P49815}. Note=Recruited to lysosomal membranes in a RHEB-dependent process in absence of nutrients (By similarity). In response to insulin signaling and phosphorylation by PKB/AKT1, the complex dissociates from lysosomal membranes and relocalizes to the cytosol (By similarity) {ECO:0000250|UniProtKB:P49815}
Tissue Location	CNS, uterus, heart, skeletal muscle, kidney and spleen.

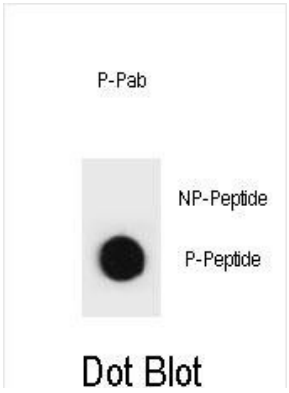
Background

acts as a tumor suppressor; may play a role in cell cycle regulation; acute phase response, and negative regulation of cell proliferation [RGD].

References

Larson, Y., et al. J. Biol. Chem. 285(32):24987-24998(2010)
Sajankila, S.P., et al. Mol. Cell. Biochem. 338 (1-2), 233-239 (2010) :
Inoue, H., et al. Biosci. Biotechnol. Biochem. 73(11):2488-2493(2009)
Di Nardo, A., et al. J. Neurosci. 29(18):5926-5937(2009)
Shiono, M., et al. Oncogene 27(52):6690-6697(2008)

Images



Dot blot analysis of rat TSC2 Antibody (Phospho T1373) Phospho-specific Pab (Cat. #AP3833a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

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