

Rabbit TSC1 Polyclonal Antibody | anti-TSC1 antibody

TSC1 Antibody

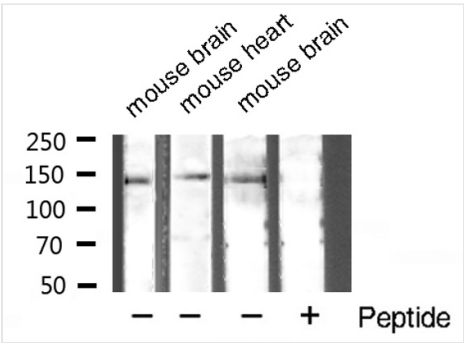
CATALOG # AAA321793	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

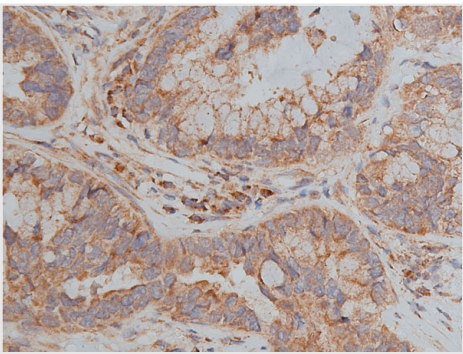
TSC1; Polyclonal Antibody; TSC1 Antibody; Hamartin; k1aa0243; LAM; TSC; Tsc1; Tsc1 gene; TSC1_HUMAN; Tuberous sclerosis 1; Tuberous sclerosis 1 protein; tumor suppressor; anti-TSC1 antibody

PRODUCT SPECIFICATIONS

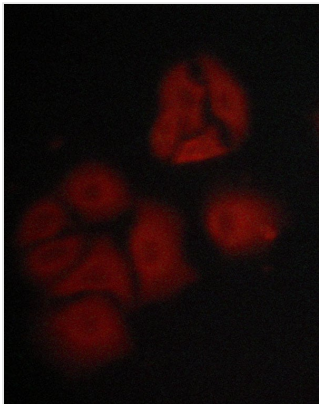
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	TSC1 antibody detects endogenous levels of total TSC1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1164
Applicable Applications for anti-TSC1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human TSC1
Subcellular Location	Cytoplasm. Membrane. At steady state found in association with membranes.
Tissue Specificity	Highly expressed in skeletal muscle, followed by heart, brain, placenta, pancreas, lung, liver and kidney. Also expressed in embryonic kidney cells.
Predicted Cross Reactivity	Horse, Sheep, Dog
Similarity	Horse (92%), Sheep (83%), Dog (92%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



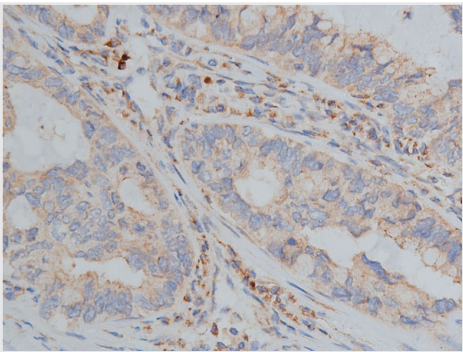
WB (Western Blot)
Western blot analysis of TSC1 expression in various cell lysate



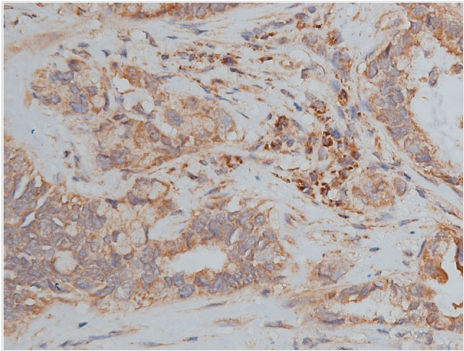
IHC (Immunohistochemistry)
AAA321793 at 1/200 staining human lung cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)
AAA321793 staining MCF-7 cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37 degree C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37 degree C. A Alexa Fluor 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.



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ADDITIONAL INFORMATION

Related Product Information for anti-TSC1 antibody	Function: In complex with TSC2, inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (PubMed:12271141, PubMed:28215400). Seems not to be required for TSC2 GAP activity towards RHEB (PubMed:15340059). Implicated as a tumor suppressor. Involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling (By similarity). Acts as a co-chaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (PubMed:29127155). Increases ATP binding to HSP90AA1 and inhibits HSP90AA1 ATPase activity (PubMed:29127155). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (PubMed:29127155). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by preventing the interaction between TSC2 and ubiquitin ligase HERC1 (PubMed:16464865, PubMed:29127155). Subunit Structure: Probably forms a complex composed of chaperones HSP90 and HSP70, co-chaperones STIP1/HOP, CDC37, PPP5C, PTGES3/p23, TSC1 and client protein TSC2 (PubMed:29127155). Forms a complex composed of chaperones HSP90 and HSP70, co-chaperones CDC37, PPP5C, TSC1 and client protein TSC2, CDK4, AKT, RAF1 and NR3C1; this complex does not contain co-chaperones STIP1/HOP and PTGES3/p23 (PubMed:29127155). Forms a complex containing HSP90AA1, TSC1 and TSC2; TSC1 is required to recruit TSC2 to the complex (PubMed:29127155). Interacts (via C-terminus) with the closed form of HSP90AA1 (via the middle domain and TPR repeat-binding motif) (PubMed:29127155). Interacts with TSC2; the interaction stabilizes TSC2 and prevents TSC2 self-aggregation (PubMed:10585443, PubMed:15963462, PubMed:16464865, PubMed:9580671, PubMed:9809973, PubMed:29127155, PubMed:28215400). Interacts with DOCK7 (PubMed:15963462). Interacts with FBXW5 (PubMed:18381890). Interacts with TBC1D7 (PubMed:17658474). Post-translational Modifications: Phosphorylation at Ser-505 does not affect interaction with TSC2. Similarity: The C-terminal putative coiled-coil domain is necessary for interaction with TSC2.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4507693
NCBI GeneID	7248
NCBI Accession #	NP_000359.1
NCBI GenBank Nucleotide #	NM_000368.4
UniProt Accession #	Q92574; Q5VVN5; B7Z897
Molecular Weight	Observed: 150 kDa Predicted: 130 kDa
NCBI Official Full Name	hamartin isoform 1
NCBI Official Synonym Full Names	TSC complex subunit 1
NCBI Official Symbol	TSC1
NCBI Official Synonym Symbols	LAM; TSC
NCBI Protein Information	hamartin
UniProt Protein Name	Hamartin
UniProt Gene Name	TSC1
UniProt Synonym Gene Names	KIAA0243; TSC

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.