Hamartin (TSC1) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Hamartin (TSC1), Polyclonal Antibody
Full Product Name	Hamartin (S505) (TSC1, Tuberous Sclerosis 1 Protein, KIAA0243, TSC) (MaxLight 550)
Product Gene Name	anti-TSC1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight550.
Purity/Purification	Purified by Immunoaffinity chromatography.
Specificity	Recognizes human TSC1.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight550 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	129.767
OMIM	gene 607341
3D Structure	ModBase 3D Structure for Q92574
Immunogen	Synthetic peptide corresponding to amino acid residues surrounding S505 of human TSC1 (KLH).
Conjugate	MaxLight550
Note	Preservative Free
Product Categories/Family for anti-TSC1 antibody	Antibodies; Disease Markers
Applications Tested/Suitable for anti-TSC1 antibody	Immunohistochemistry (IHC), FLISA
Application Notes for anti-TSC1 antibody	IHC: 1:10-1:50 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-TSC1 antibody	MBS6479437 is an antibody targeting TSC1. Also known as Hamartin (S505) (TSC1, Tuberous Sclerosis 1 Protein, KIAA0243, TSC) (MaxLight 550). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-TSC1 antibody	1. Wu, J., et al., J. Cutan. Pathol. 31(5):383-387 (2004). 2. Lewis, J.C., et al., J. Med. Genet. 41(3):203-207 (2004). 3. J, et al., J. Child Neurol. 19(2):102-106 (2004). 4. Murthy, V., et al., J. Biol. Chem. 279(2):1351-1358 (2004). 5. Astrinidis, A., et al., J. Biol. Chem. 278(51):51372-51379 (2003).
Other Notes	Small volumes of anti-TSC1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TSC1. It may not necessarily be applicable to this product.

NCBI GI #	4507693
NCBI GeneID	7248
NCBI Accession #	NP_000359
UniProt Primary Accession #	Q92574
UniProt Related Accession #	Q92574
GenBank Nucleotide #	NP_000359.1
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
UniProt Protein Name	Hamartin
UniProt Synonym Protein Names	Tuberous sclerosis 1 protein
Protein Family	Hamartin
UniProt Gene Name	TSC1
UniProt Synonym Gene Names	KIAA0243; TSC
UniProt Entry Name	TSC1_HUMAN
NCBI Protein Information	hamartin
NCBI Summary for TSC1	This gene is a tumor suppressor gene that encodes the growth inhibitory protein hamartin. The encoded protein interacts with and stabilizes the GTPase activating protein tuberin. This hamartin-tuberin complex negatively regulates mammalian target of rapamycin complex 1 (mTORC1) signalling which is a major regulator of anabolic cell growth. This protein also functions as a co-chaperone for Hsp90 that inhibits its ATPase activity. This protein functions as a facilitator of Hsp90-mediated folding of kinase and non-kinase clients, including Tsc2 and thereby preventing their ubiquitination and proteasomal degradation. Mutations in this gene have been associated with tuberous sclerosis. [provided by RefSeq, Apr 2018]
UniProt Comments for TSC1	TSC1: tuberous sclerosis protein 1 (TSC1). May have tumor suppressor activity. Together with tuberin (TSC2), inhibits mammalian target of rapamycin (mTOR)-mediated signaling to eukaryotic initiation factor 4E-binding protein 1 (4E-BP1) and ribosomal protein S6 kinase. Regulated by the phosphatidylinositol 3-kinase/Akt pathway and phosphorylation of tuberin. Phosphorylated by cyclin-dependent kinase 1/cyclin B during the cell cycle. Protein type: Tumor suppressor; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 9q34 Cellular Component: TSC1-TSC2 complex; growth cone; protein complex; membrane; intracellular membrane-bound organelle; lamellipodium; cytoplasm; plasma membrane; actin filament; cell cortex; cytosol Molecular Function: protein binding; chaperone binding; protein N-terminus binding; GTPase activating protein binding; GTPase regulator activity Biological Process: myelination; regulation of cell cycle; protein heterooligomerization; regulation of cell-matrix adhesion; cell-matrix adhesion; negative regulation of insulin receptor signaling pathway; negative regulation of cell size; regulation of phosphoprotein phosphatase activity; cardiac muscle cell differentiation; response to insulin stimulus; regulation of translation; negative regulation of cell proliferation; positive regulation of focal adhesion formation; cell projection organization and biogenesis; synapse organization and biogenesis; cell cycle arrest; kidney development; potassium ion transport; negative regulation of TOR signaling pathway; protein stabilization; hippocampus development; rRNA export from nucleus; negative regulation of translation; glucose import; regulation of stress fiber formation; neural tube closure; insulin receptor signaling pathway; cerebral cortex development; regulation of protein kinase activity Disease: Lymphangioleiomyomatosis; Focal Cortical Dysplasia Of Taylor; Tuberous Sclerosis 1

Research Articles on TSC1	**1.** miR-92b-3p was found to act as an oncomiR, promoting cell proliferation by downregulating TSC1 in clear cell renal cell carcinoma .
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