Phospho-Rat Tsc1(s312) Blocking Peptide

PRODUCT OVERVIEW

Product Name	TSC1 (S312), Blocking Peptide
Full Product Name	Phospho-rat TSC1(S312) Blocking Peptide
Product Gene Name	Tsc1 blocking peptide
Product Synonym Names	Hamartin; Tuberous sclerosis 1 protein homolog; Tsc1
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence is selected from aa 305-317 of RAT Tsc1
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	TSC1 (S312) peptide (MBS9230800) is used for blocking the activity of TSC1 (S312) antibody (MBS9200715)
Molecular Weight	129,022 Da
Cellular Location	Cytoplasm. Membrane; Peripheral membrane protein. Note: At steady state found in association with membranes.
Tissue Location	Highly expressed in brain, spleen and kidney, followed by liver and heart
Related Product Information for Tsc1 blocking peptide	In complex with TSC2, inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (By similarity). Implicated as a tumor suppressor. Involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling (By similarity).
Other Notes	Small volumes of Tsc1 blocking peptide 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.
Searchable Terms for Tsc1 purchase	MBS9230800 is a blocking peptide targeting Tsc1. Also known as Phospho-rat TSC1(S312) Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Tsc1. It may not necessarily be applicable to this product.

NCBI GI #	11177894
NCBI GeneID	60445
NCBI Accession #	NP_068626.1
UniProt Primary Accession #	Q9Z136
UniProt Related Accession #	Q9Z136
GenBank Nucleotide #	NM_021854.1
NCBI Official Full Name	hamartin
NCBI Official Synonym Full Names	tuberous sclerosis 1
NCBI Official Symbol	Tsc1
UniProt Protein Name	Hamartin
UniProt Synonym Protein Names	Tuberous sclerosis 1 protein homolog
Protein Family	Hamartin

UniProt Gene Name	Tsc1
UniProt Entry Name	TSC1_RAT
NCBI Protein Information	hamartin
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: Motility/polarity/chemotaxis; Tumor suppressor Cellular Component: actin filament; cell cortex; cytoplasm; cytoskeleton; cytosol; growth cone; intracellular membrane-bound organelle; lamellipodium; membrane; nucleus; perinuclear region of cytoplasm; plasma membrane; protein complex; TSC1-TSC2 complex Molecular Function: chaperone binding; GTPase activating protein binding; GTPase regulator activity; protein binding; protein N-terminus binding Biological Process: adaptive immune response; adult locomotory behavior; cardiac muscle cell differentiation; cell projection organization and biogenesis; cell-matrix adhesion; cerebral cortex development; glucose import; hippocampus development; kidney development; memory T cell differentiation; myelination; negative regulation of cell proliferation; negative regulation of cell size; negative regulation of insulin receptor signaling pathway; negative regulation of macroautophagy; negative regulation of TOR signaling pathway; negative regulation of translation; nervous system development; neural tube closure; positive regulation of focal adhesion formation; potassium ion transport; protein heterooligomerization; protein stabilization; regulation of actin cytoskeleton organization and biogenesis; regulation of cell cycle; regulation of cell-matrix adhesion; regulation of focal adhesion formation; regulation of GTPase activity; regulation of phosphoprotein phosphatase activity; regulation of protein kinase activity; regulation of stress fiber formation; regulation of translation; response to insulin stimulus; rRNA export from nucleus; synapse organization and biogenesis
Research Articles on Tsc1	**1.** TSC1 is selectively induced by ischemia in hippocampal CA3 neurons; in CA1 neurons, TSC1 was unaffected by ischemia but was upregulated by ischemic preconditioning preceding ischemia; overexpression of TSC1 increased resistance to oxygen glucose deprivation by inducing productive autophagy
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