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Tuberin (TSC2) Antibody (Center) Blocking peptide

Synthetic peptide
Catalog # BP6348c

Specification

Tuberin (TSC2) Antibody (Center) Blocking peptide - Product Information

Primary Accession P49815

Tuberin (TSC2) Antibody (Center) Blocking peptide - Additional Information

Gene ID 7249

Other Names
Tuberin, Tuberous sclerosis 2 protein, TSC2, TSC4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6348c was selected from the Center region of human TSC2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Tuberin (TSC2) Antibody (Center) Blocking peptide - Protein Information

Name TSC2

Synonyms TSC4

Tuberin (TSC2) Antibody (Center) Blocking peptide - Background

Mutations in TSC2 lead to tuberous sclerosis complex. The protein is believed to be a tumor suppressor and is able to specifically stimulate the intrinsic GTPase activity of the Ras-related protein RAP1A and RAB5. The protein associates with hamartin in a cytosolic complex, possibly acting as a chaperone for hamartin. TSC2 may have a function in vesicular transport, but may also play a role in the regulation of cell growth arrest and in the regulation of transcription mediated by steroid receptors. Interaction between TSC1 and TSC2 may facilitate vesicular docking.

Tuberin (TSC2) Antibody (Center) Blocking peptide - References

Li, Y., et al., Mol. Cell. Biol. 24(18):7965-7975 (2004).Karbowniczek, M., et al., J. Biol. Chem. 279(29):29930-29937 (2004).Corradetti, M.N., et al., Genes Dev. 18(13):1533-1538 (2004).Birchenall-Roberts, M.C., et al., J. Biol. Chem. 279(24):25605-25613 (2004).Lewis, J.C., et al., J. Med. Genet. 41(3):203-207 (2004).

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Function
In complex with TSC1, this tumor suppressor inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (PubMed:12271141, PubMed:28215400). Acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (PubMed:15340059). May also play a role in microtubule-mediated protein transport (By similarity). Also stimulates the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 (By similarity).

Cellular Location
Cytoplasm. Membrane; Peripheral membrane protein. Note=At steady state found in association with membranes

Tissue Location
Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta

Tuberin (TSC2) Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides