

# Tuberin Rabbit mAb

Catalog # AP76750

## Product Information

Application	WB, IP
Primary Accession	<a href="#">P49815</a>
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	200608

## Additional Information

Gene ID	7249
Other Names	TSC2
Dilution	WB~~1/500-1/1000 IP~~N/A
Format	Liquid

## Protein Information

Name	TSC2 {ECO:0000303   PubMed:7558029, ECO:0000312   HGNC:HGNC:12363}
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Function	<p>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:<a href="#">12172553</a>, PubMed:<a href="#">12271141</a>, PubMed:<a href="#">12842888</a>, PubMed:<a href="#">12906785</a>, PubMed:<a href="#">15340059</a>, PubMed:<a href="#">22819219</a>, PubMed:<a href="#">24529379</a>, PubMed:<a href="#">28215400</a>, PubMed:<a href="#">33436626</a>, PubMed:<a href="#">35772404</a>). 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 (PubMed:<a href="#">12172553</a>, PubMed:<a href="#">12820960</a>, PubMed:<a href="#">12842888</a>, PubMed:<a href="#">12906785</a>, PubMed:<a href="#">15340059</a>, PubMed:<a href="#">22819219</a>, PubMed:<a href="#">24529379</a>, PubMed:<a href="#">33436626</a>). 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 (PubMed:<a href="#">12172553</a>, PubMed:<a href="#">12271141</a>, PubMed:<a href="#">12842888</a>, PubMed:<a href="#">12906785</a>, PubMed:<a href="#">22819219</a>, PubMed:<a href="#">24529379</a>, PubMed:<a href="#">28215400</a>, PubMed:<a href="#">35772404</a>). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (PubMed:<a href="#">12172553</a>, PubMed:<a href="#">24529379</a>). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling (By similarity). Also stimulates the intrinsic GTPase activity of the Ras- related proteins RAP1A and RAB5 (By</p>
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similarity).

### Cellular Location

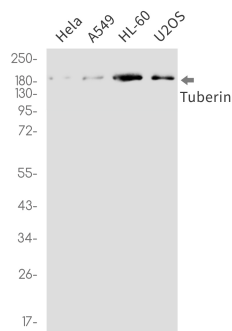
Lysosome membrane; Peripheral membrane protein. Cytoplasm, cytosol  
Note=Recruited to lysosomal membranes in a RHEB-dependent process in absence of nutrients (PubMed:24529379). In response to insulin signaling and phosphorylation by PKB/AKT1, the complex dissociates from lysosomal membranes and relocates to the cytosol (PubMed:24529379)

### Tissue Location

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

## Images

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