

## Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody Catalog # ABO16765

### Specification

#### Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC
Primary Accession	<a href="#">P49815</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human, Mouse
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody . Tested in WB, IHC applications. This antibody reacts with Human, Mouse.

#### Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody - Additional Information

Gene ID 7249

#### Other Names

Tuberin, Tuberous sclerosis 2 protein, TSC2 {ECO:0000303|PubMed:7558029, ECO:0000312|HGNC:HGNC:12363}

#### Application Details

WB 1:500-1:2000<br>IHC 1:50-1:200

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human Phospho-Tuberin (T1462)

#### Purification

Affinity-chromatography

Storage

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

#### Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody - Protein Information

**Name** TSC2 {ECO:0000303|PubMed:7558029, ECO:0000312|HGNC:HGNC:12363}

#### Function

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:[12172553](http://www.uniprot.org/citations/12172553) target="\_blank">12172553</a>, PubMed:[12271141](http://www.uniprot.org/citations/12271141) target="\_blank">12271141</a>, PubMed:[12842888](http://www.uniprot.org/citations/12842888) target="\_blank">12842888</a>, PubMed:[12906785](http://www.uniprot.org/citations/12906785) target="\_blank">12906785</a>, PubMed:[15340059](http://www.uniprot.org/citations/15340059) target="\_blank">15340059</a>, PubMed:[22819219](http://www.uniprot.org/citations/22819219) target="\_blank">22819219</a>, PubMed:[24529379](http://www.uniprot.org/citations/24529379) target="\_blank">24529379</a>, PubMed:[28215400](http://www.uniprot.org/citations/28215400) target="\_blank">28215400</a>, PubMed:[33436626](http://www.uniprot.org/citations/33436626) target="\_blank">33436626</a>, PubMed:[35772404](http://www.uniprot.org/citations/35772404) target="\_blank">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:[12172553](http://www.uniprot.org/citations/12172553) target="\_blank">12172553</a>, PubMed:[12820960](http://www.uniprot.org/citations/12820960) target="\_blank">12820960</a>, PubMed:[12842888](http://www.uniprot.org/citations/12842888) target="\_blank">12842888</a>, PubMed:[12906785](http://www.uniprot.org/citations/12906785) target="\_blank">12906785</a>, PubMed:[15340059](http://www.uniprot.org/citations/15340059) target="\_blank">15340059</a>, PubMed:[22819219](http://www.uniprot.org/citations/22819219) target="\_blank">22819219</a>, PubMed:[24529379](http://www.uniprot.org/citations/24529379) target="\_blank">24529379</a>, PubMed:[33436626](http://www.uniprot.org/citations/33436626) target="\_blank">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:[12172553](http://www.uniprot.org/citations/12172553) target="\_blank">12172553</a>, PubMed:[12271141](http://www.uniprot.org/citations/12271141) target="\_blank">12271141</a>, PubMed:[12842888](http://www.uniprot.org/citations/12842888) target="\_blank">12842888</a>, PubMed:[12906785](http://www.uniprot.org/citations/12906785) target="\_blank">12906785</a>, PubMed:[22819219](http://www.uniprot.org/citations/22819219) target="\_blank">22819219</a>, PubMed:[24529379](http://www.uniprot.org/citations/24529379) target="\_blank">24529379</a>, PubMed:[28215400](http://www.uniprot.org/citations/28215400) target="\_blank">28215400</a>, PubMed:[35772404](http://www.uniprot.org/citations/35772404) target="\_blank">35772404</a>). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (PubMed:[12172553](http://www.uniprot.org/citations/12172553) target="\_blank">12172553</a>, PubMed:[24529379](http://www.uniprot.org/citations/24529379) target="\_blank">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 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.

### Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody - Protocols

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

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-Phospho-Tuberin (T1462) Rabbit Monoclonal Antibody - Images**