

TSC1 Blocking Peptide
Catalog # PBV10467b**Specification**

TSC1 Blocking Peptide - Product Information

Primary Accession	O9EP53
Other Accession	NP_075025
Gene ID	64930
Calculated MW	128746

TSC1 Blocking Peptide - Additional Information**Gene ID** 64930**Application & Usage**

The peptide is used for blocking the antibody activity of TSC1. It usually blocks the antibody activity completely in Western blot analysis by incubating the peptide with equal volume of antibody for 30-60 minutes at 37°C.

Other Names

Hamartin, Tuberous sclerosis 1 protein homolog, Tsc1, Kiaa0243

Target/Specificity

TSC1

Formulation

50 µg (0.5 mg/ml) in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA and 0.02% thimerosal.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

TSC1 Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

TSC1 Blocking Peptide - Protein Information**Name** Tsc1 {ECO:0000303|PubMed:11130985, ECO:0000312|MGI:MGI:1929183}**Function**

Non-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:12820960). The TSC-TBC complex acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (PubMed:12820960). 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:12820960). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (By similarity). Within the TSC-TBC complex, TSC1 stabilizes TSC2 and prevents TSC2 self-aggregation (By similarity). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling (PubMed:16707451). Also acts as a co-chaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (By similarity). Increases ATP binding to HSP90AA1 and inhibits HSP90AA1 ATPase activity (PubMed:29127155). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (By similarity). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by preventing the interaction between TSC2 and ubiquitin ligase HERC1 (By similarity).

Cellular Location

Lysosome membrane {ECO:0000250|UniProtKB:Q92574}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q92574}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q92574}. Note=Recruited to lysosomal membranes in a RHEB-dependent process in absence of nutrients. In response to nutrients, the complex dissociates from lysosomal membranes and relocates to the cytosol. {ECO:0000250|UniProtKB:Q92574}

TSC1 Blocking Peptide - 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](#)

TSC1 Blocking Peptide - Images