

TSC2 Blocking Peptide
Catalog # PBV10474b**Specification**

TSC2 Blocking Peptide - Product Information

Primary Accession	P49816
Gene ID	24855
Calculated MW	201278

TSC2 Blocking Peptide - Additional Information**Gene ID** 24855**Application & Usage**

The peptide is used for blocking the antibody activity of TSC2. 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

Tuberin, Tuberous sclerosis 2 protein homolog, Tsc2

Target/Specificity

TSC2

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**

TSC2 Blocking Peptide is for research use only and not for use in diagnostic or therapeutic procedures.

TSC2 Blocking Peptide - Protein Information**Name** Tsc2 {ECO:0000303|PubMed:8519695, ECO:0000312|RGD:3908}**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:<a href="http://www.uniprot.org/citations/12172553"

target="_blank">12172553). 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 (By similarity). 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 (By similarity). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (By similarity). Involved in microtubule-mediated protein transport via its ability to regulate mTORC1 signaling (PubMed:16707451). Also stimulates the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 (PubMed:9045618).

Cellular Location

Lysosome membrane {ECO:0000250|UniProtKB:P49815}; Peripheral membrane protein {ECO:0000250|UniProtKB:P49815}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P49815}. Note=Recruited to lysosomal membranes in a RHEB-dependent process in absence of nutrients (By similarity). In response to insulin signaling and phosphorylation by PKB/AKT1, the complex dissociates from lysosomal membranes and relocates to the cytosol (By similarity) {ECO:0000250|UniProtKB:P49815}

Tissue Location

CNS, uterus, heart, skeletal muscle, kidney and spleen.

TSC2 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](#)

TSC2 Blocking Peptide - Images