

Phospho-TSC1(Y297) Blocking Peptide
Synthetic peptide
Catalog # BP3895a**Specification****Phospho-TSC1(Y297) Blocking Peptide - Product Information**

Primary Accession [Q92574](#)
Other Accession [NP_000359.1](#)

Phospho-TSC1(Y297) Blocking Peptide - Additional Information**Gene ID 7248****Other Names**

Hamartin, Tuberous sclerosis 1 protein,
TSC1, KIAA0243, TSC

Target/Specificity

The synthetic peptide sequence is selected
from aa 290-304 of HUMAN TSC1

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.

Phospho-TSC1(Y297) Blocking Peptide - Protein Information**Name TSC1****Synonyms** KIAA0243, TSC**Function**

In complex with TSC2, inhibits the
nutrient-mediated or growth
factor-stimulated phosphorylation of S6K1

Phospho-TSC1(Y297) Blocking Peptide - Background

This gene encodes a growth inhibitory protein
thought to
play a role in the stabilization of tuberin.
Mutations in this gene
have been associated with tuberous sclerosis.
Alternative splicing
results in multiple transcript variants.

Phospho-TSC1(Y297) Blocking Peptide - References

Hoogeveen-Westerveld, M., et al. Biochim.
Biophys. Acta 1802(9):774-781(2010)
Mehta, M.S., et al. Breast Cancer Res. Treat.
(2010) In press :
Mieulet, V., et al. Trends Mol Med
16(7):329-335(2010)
Liu, C.Y., et al. Carcinogenesis
31(7):1259-1263(2010)
Guo, L., et al. Acta Biochim. Biophys. Sin.
(Shanghai) 42(4):266-273(2010)

and EIF4EBP1 by negatively regulating mTORC1 signaling (PubMed:12271141, PubMed:28215400). Seems not to be required for TSC2 GAP activity towards RHEB (PubMed:15340059). Implicated as a tumor suppressor. Involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling (By similarity). Acts as a co-chaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (PubMed:29127155). 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 (PubMed:29127155). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by preventing the interaction between TSC2 and ubiquitin ligase HERC1 (PubMed:16464865, PubMed:29127155).

Cellular Location

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

Tissue Location

Highly expressed in skeletal muscle, followed by heart, brain, placenta, pancreas, lung, liver and kidney. Also expressed in embryonic kidney cells

Phospho-TSC1(Y297) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)