

Phospho-rat TSC1(Y297) Blocking Peptide
Synthetic peptide
Catalog # BP3832a**Specification****Phospho-rat TSC1(Y297) Blocking Peptide -
Product Information**

Primary Accession [Q9Z136](#)
Other Accession [NP_068626.1](#)

**Phospho-rat TSC1(Y297) Blocking Peptide -
Additional Information**

Gene ID 60445

Other Names

Hamartin, Tuberous sclerosis 1 protein
homolog, Tsc1

Target/Specificity

The synthetic peptide sequence is selected
from aa 291-304 of RAT 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-rat TSC1(Y297) Blocking Peptide -
Protein Information**

Name Tsc1

Function

In complex with TSC2, inhibits the
nutrient-mediated or growth
factor-stimulated phosphorylation of S6K1
and EIF4EBP1 by negatively regulating
mTORC1 signaling (By similarity).

**Phospho-rat TSC1(Y297) Blocking Peptide
- Background**

In complex with TSC2, inhibits the
nutrient-mediated or growth factor-stimulated
phosphorylation of S6K1 and EIF4EBP1 by
negatively regulating mTORC1 signaling (By
similarity). Implicated as a tumor suppressor.
Involved in microtubule-mediated protein
transport, but this seems to be due to
unregulated mTOR signaling (By similarity).

**Phospho-rat TSC1(Y297) Blocking Peptide
- References**

Inoue, H., et al. Biosci. Biotechnol. Biochem.
73(11):2488-2493(2009)
Di Nardo, A., et al. J. Neurosci.
29(18):5926-5937(2009)
Chen, P., et al. Exp. Mol. Pathol.
86(2):101-107(2009)
Momose, S., et al. Biochem. Biophys. Res.
Commun. 356(3):693-698(2007)
Goncharova, E., et al. J. Cell Biol.
167(6):1171-1182(2004)

Implicated as a tumor suppressor. Involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling (PubMed:16707451). 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 (By similarity). 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

Cytoplasm

{ECO:0000250|UniProtKB:Q92574}.

Membrane

{ECO:0000250|UniProtKB:Q92574};

Peripheral membrane protein

{ECO:0000250|UniProtKB:Q92574}.

Note=At steady state found in association with membranes.

{ECO:0000250|UniProtKB:Q92574}

Tissue Location

Highly expressed in brain, spleen and kidney, followed by liver and heart

**Phospho-rat TSC1(Y297) Blocking Peptide
- Protocols**

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

- [Blocking Peptides](#)