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Phospho-rat TSC1(S312) Blocking Peptide

Synthetic peptide
Catalog # BP3830a

Specification

Phospho-rat TSC1(S312) Blocking Peptide - Product Information

Primary Accession	Q9Z136
Other Accession	NP_068626.1

Phospho-rat TSC1(S312) 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 305-317 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(S312) 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(S312) 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(S312) 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(S312) Blocking Peptide - Protocols

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

- Blocking Peptides