

# Phospho-TSC1(S1080) Blocking Peptide

Synthetic peptide Catalog # BP3892a

# **Specification**

Phospho-TSC1(S1080) Blocking Peptide - Product Information

Primary Accession Other Accession

<u>Q92574</u> <u>Q9Z136</u>, <u>Q9EP53</u>, NP 000359.1

Phospho-TSC1(S1080) 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 1073-1087 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(S1080) Blocking Peptide - Protein Information

Name TSC1

Synonyms KIAA0243, TSC

### **Function**

In complex with TSC2, inhibits the nutrient-mediated or growth

# Phospho-TSC1(S1080) 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(S1080) 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)



factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (PubMed:<a href="http:/ /www.uniprot.org/citations/12271141" target=" blank">12271141</a>, PubMed:<a href="http://www.uniprot.org/ci tations/28215400" target=" blank">28215400</a>). Seems not to be required for TSC2 GAP activity towards RHEB (PubMed:<a href="http://ww w.uniprot.org/citations/15340059" target=" blank">15340059</a>). 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 cochaperone for HSP90AA1 facilitating HSP90AA1 chaperoning of protein clients such as kinases, TSC2 and glucocorticoid receptor NR3C1 (PubMed:<a href="http://w ww.uniprot.org/citations/29127155" target=" blank">29127155</a>). Increases ATP binding to HSP90AA1 and inhibits HSP90AA1 ATPase activity (PubMed:<a href="http://www.uniprot.org/c itations/29127155" target=" blank">29127155</a>). Competes with the activating co-chaperone AHSA1 for binding to HSP90AA1, thereby providing a reciprocal regulatory mechanism for chaperoning of client proteins (PubMed:<a href="http://www.unip rot.org/citations/29127155" target=" blank">29127155</a>). Recruits TSC2 to HSP90AA1 and stabilizes TSC2 by preventing the interaction between TSC2 and ubiquitin ligase HERC1 (PubMed: <a hre f="http://www.uniprot.org/citations/164648 65" target="\_blank">16464865</a>, PubMed:<a href="http://www.uniprot.org/ci tations/29127155" target=" blank">29127155</a>).

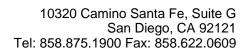
#### **Cellular Location**

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(S1080) Blocking Peptide - Protocols





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

• Blocking Peptides