

### Phospho-TSC2(S664) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP3432a

# **Specification**

# Phospho-TSC2(S664) Antibody - Product Information

Application IF, DB,E
Primary Accession Reactivity Human
Host Clonality Polyclonal Isotype Rabbit Ig

Phospho-TSC2(S664) Antibody - Additional Information

#### **Gene ID** 7249

#### **Other Names**

Tuberin, Tuberous sclerosis 2 protein, TSC2, TSC4

# **Target/Specificity**

This TSC2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S664 of human TSC2.

#### **Dilution**

IF~~1:10~50 DB~~1:500

### **Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### Storage

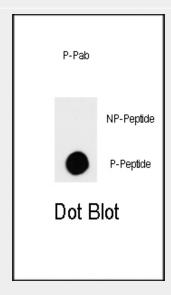
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### **Precautions**

Phospho-TSC2(S664) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.



Confocal immunofluorescent analysis of Phospho-TSC2-pS664
Antibody(Cat#AP3432a) with MCF-7 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).



Dot blot analysis of anti-TSC2-pS664 Phospho-specific Pab (Cat.#AP3432a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per



Phospho-TSC2(S664) Antibody - Protein Information

#### Name TSC2

# **Synonyms** TSC4

#### **Function**

In complex with TSC1, this tumor suppressor inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (PubMed:<a h ref="http://www.uniprot.org/citations/12271141" target="\_blank">12271141</a>, PubMed:<a href="http://www.uniprot.org/citations/28215400" target="\_blank">28215400" target="\_blank">28215400</a>). Acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (PubMed:<a href="http://www.uniprot.org/c

itations/15340059" target="\_blank">15340059</a>). May also play a role in microtubule-mediated protein transport (By similarity). Also stimulates the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 (By similarity).

#### **Cellular Location**

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

## **Tissue Location**

Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta

#### Phospho-TSC2(S664) Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

# Phospho-TSC2(S664) Antibody - Background

Mutations in TSC2 lead to tuberous sclerosis complex. The protein is believed to be a tumor suppressor and is able to specifically stimulate the intrinsic GTPase activity of the Ras-related protein RAP1A and RAB5. The protein associates with hamartin in a cytosolic complex, possibly acting as a chaperone for hamartin. TSC2 may have a function in vesicular transport, but may also play a role in the regulation of cell growth arrest and in the regulation of transcription mediated by steroid receptors. Interaction between TSC1 and TSC2 may facilitate vesicular docking.

# Phospho-TSC2(S664) Antibody - References

Li, Y., et al., Mol. Cell. Biol. 24(18):7965-7975 (2004). Karbowniczek, M., et al., J. Biol. Chem. 279(29):29930-29937 (2004). Corradetti, M.N., et al., Genes Dev. 18(13):1533-1538 (2004). Birchenall-Roberts, M.C., et al., J. Biol. Chem. 279(24):25605-25613 (2004). Lewis, J.C., et al., J. Med. Genet. 41(3):203-207 (2004).