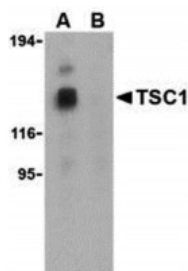


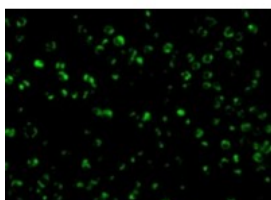


## TSC1 Antibody

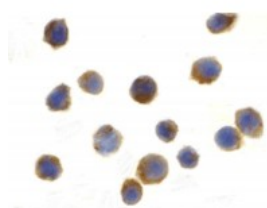
CATALOG NUMBER: 3505



Western blot analysis of TSC1 in EL4 cell lysate with TSC1 antibody at 1 ug/mL in the (A) absence and (B) presence of blocking peptide.



Immunofluorescence of TSC1 in L1210 cells with TSC1 antibody at 10 ug/mL.



Immunocytochemistry of TSC1 in EL4 cells with TSC1 antibody at 2 ug/mL

### Specifications

<b>SPECIES REACTIVITY:</b>	Human, Mouse, Rat
<b>TESTED APPLICATIONS:</b>	ELISA, ICC, IF, WB
<b>APPLICATIONS:</b>	TSC1 antibody can be used for the detection of TSC1 by Western blot at 1 ug/mL. Antibody can also be used for immunocytochemistry starting at 2 ug/mL. For immunofluorescence start at 2 ug/mL.
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
<b>POSITIVE CONTROL:</b>	1) Cat. No. 1287 - EL4 Cell Lysate
<b>PREDICTED MOLECULAR WEIGHT:</b>	Predicted: 128 kDa Observed: 135 kDa
<b>SPECIFICITY:</b>	At least two isoforms of TSC1 are known to exist; this antibody will detect both isoforms. TSC1 antibody is predicted to not cross-react with TSC2.
<b>IMMUNOGEN:</b>	TSC1 antibody was raised against a 15 amino acid synthetic peptide from the middle region of human TSC1.  The immunogen is located within amino acids 220 - 270 of TSC1.
<b>HOST SPECIES:</b>	Rabbit

### Properties

<b>PURIFICATION:</b>	TSC1 Antibody is affinity chromatography purified via peptide column.
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	TSC1 Antibody is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</b>	TSC1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
<b>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG

**CONJUGATE:** Unconjugated

#### Additional Info

**ALTERNATE NAMES:** TSC1 Antibody: LAM, TSC, KIAA0243, Hamartin, Tuberous sclerosis 1 protein

**ACCESSION NO.:** AAC51674

**PROTEIN GI NO.:** 2331281

**OFFICIAL SYMBOL:** TSC1

**GENE ID:** 7248

#### Background

**BACKGROUND:** TSC1 Antibody: Tuberous sclerosis complex (TSC) is an autosomal dominant tumor syndrome caused by mutations in either of the TSC1 or TSC2 tumor suppressor genes. The products of these genes form a protein complex that indirectly decreases the signaling of the mammalian Target of Rapamycin (TOR), an evolutionarily conserved serine/threonine kinase that regulates cell growth and cell cycle through its ability to integrate signals from nutrient levels and growth factors. TOR activity is stimulated by Rheb, a member of the Ras superfamily of G-proteins, when the GTP/GDP ratio bound to Rheb is high. Immunoprecipitated TSC1/TSC2 has been shown to stimulate Rheb GTPase activity in vitro, suggesting that the TSC1/TSC2 decreases the ability of Rheb to stimulate TOR activity. This is supported by experiments showing overexpression of TSC1 and TSC2 results in a significant decrease in the GTP/GDP ratio bound to Rheb and the inhibition of cell growth. A shorter 40 kDa isoform of TSC1 has been shown to exist but its function is unknown.

**REFERENCES:**

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- 3) Tabancay Jr AP, Gau CL, Machado IM, et al. Identification of dominant negative mutants of Rheb GTPase and their use to implicate the involvement of human Rheb in the activation of p70S6K. *J. Biol. Chem.* 2003; 278:39921-30.
- 4) Inoki K, Li Y, Xu T, et al. Rheb GTPase is a direct target of TSC2 GAP activity and regulates mTOR signaling. *Genes Dev.* 2003; 17:1829-34.

**FOR RESEARCH USE ONLY**

December 12, 2016