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Datasheet for 600-401-FQ9

# TSC1 Antibody

## Overview

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| **Description:** | Anti-TSC1 (RABBIT) Antibody - 600-401-FQ9 |
| **Item No.:** | 600-401-FQ9 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, IF, IHC, WB |
| **Reactivity:** | Human, Mouse, Rat |
| **Host Species:** | Rabbit |

## Product Details

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| **Background:** | 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. |
| **Synonyms:** | TSC1 Antibody, LAM, TSC, KIAA0243, Hamartin, Tuberous sclerosis 1 protein |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | TSC1 |
| **Reactivity:** | Human, Mouse, Rat |

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| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | Anti-TSC1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a 15 amino acid synthetic peptide from the internal region of human TSC1. TSC1 antibody will recognize both isoforms of TSC1. |
| **Purity/Specificity:** | Anti-TSC1 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with TSC1 from other sources has not been determined. |
| **Relevant Links:** | • UniProtKB - Q92574<br>• GeneID - 7248<br>• NCBI - NP_000359.1 |

## Application Details

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| **Tested Applications:** | ELISA, IF, IHC, WB |
| **Application Note:** | Anti-TSC1 Antibody has been tested for use in ELISA, Western Blotting, Immunocytochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 130 kDa in Western Blots of specific cell lysates and tissues. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:10,000 |
| **IF:** | 2 µg/mL |
| **WB:** | 1 µg/mL |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1 mg/mL by UV absorbance at 280 nm |
| **Buffer:** | 0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2 |
| **Preservative:** | 0.02% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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| **Shipping Condition:** | Dry Ice |

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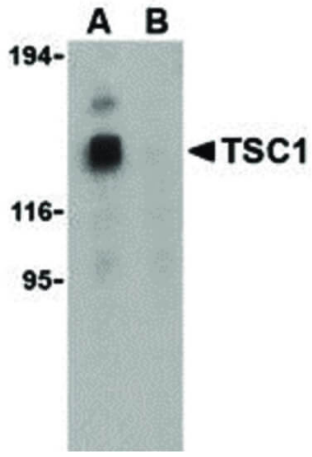
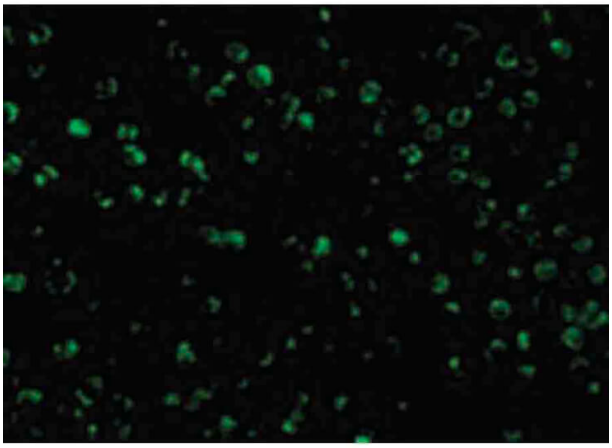
| **Storage Condition:** | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

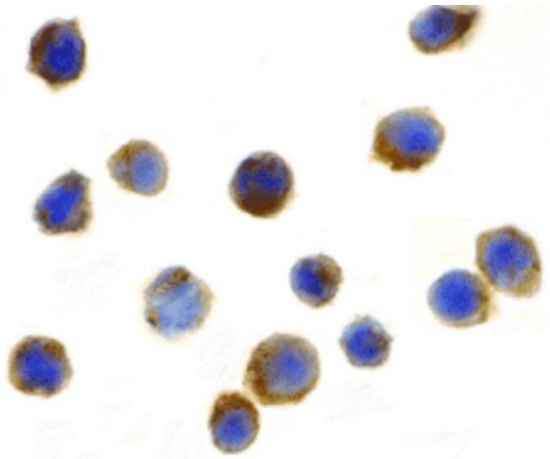
## Images




**Western Blot**
Western blot analysis of TSC1 antibody in EL4 cell lysate. Lane A: TSC1 antibody in the absence of blocking peptide. Lane B: TSC1 antibody in the presence of blocking peptide. Load: 35 µg per lane. Primary antibody: TSC1 antibody at 1 µg/mL for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 96 kDa, 122 kDa for TSC1. Other band(s): TSC1 splice variants and isoforms.



**Immunofluorescence Microscopy**
Immunofluorescence Microscopy of TSC1 antibody. Cell Type: L1210 cells. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: TSC1 antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: TSC1 is located in the cell membrane. Staining: TSC1 as green fluorescent signal.



**Immunohistochemistry**
Immunocytochemistry of TSC1 antibody. Cell Type: EL4 cells. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: TSC1 antibody at 2 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: TSC1 is located in the cell membrane. Staining: TSC1 is stained brown with hematoxylin purple nuclear counterstain.

## Disclaimer