

**Datasheet for 600-401-FQ9****TSC1 Antibody****Overview**

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

**Product Details**

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

**Target Details**

|                    |                   |
|--------------------|-------------------|
| <b>Gene Name:</b>  | TSC1              |
| <b>Reactivity:</b> | Human, Mouse, Rat |

|                            |                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Immunogen Type:</b>     | Conjugated Peptide                                                                                                                                                                                                            |
| <b>Immunogen:</b>          | 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. |
| <b>Purity/Specificity:</b> | Anti-TSC1 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with TSC1 from other sources has not been determined.                                                 |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - Q92574</a></li><li>• <a href="#">GeneID - 7248</a></li><li>• <a href="#">NCBI - NP_000359.1</a></li></ul>                                                     |

## Application Details

|                             |                                                                                                                                                                                                                                                                                          |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b> | ELISA, IF, IHC, WB                                                                                                                                                                                                                                                                       |
| <b>Application Note:</b>    | 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. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                          |
| <b>ELISA:</b>               | 1:10,000                                                                                                                                                                                                                                                                                 |
| <b>IF:</b>                  | 2 µg/mL                                                                                                                                                                                                                                                                                  |
| <b>WB:</b>                  | 1 µg/mL                                                                                                                                                                                                                                                                                  |

## Formulation

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

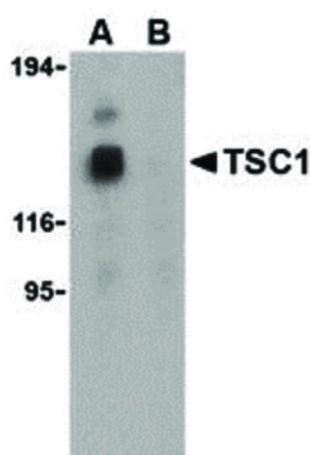
## Shipping & Handling

|                            |         |
|----------------------------|---------|
| <b>Shipping Condition:</b> | Dry Ice |
|----------------------------|---------|

**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.

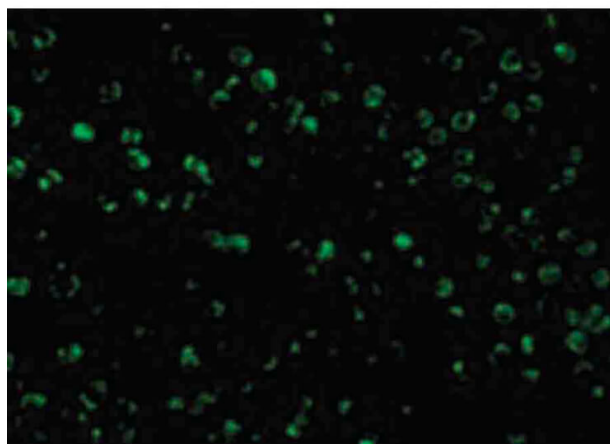
**Expiration:** Expiration date is one (1) year from date of receipt.

## Images



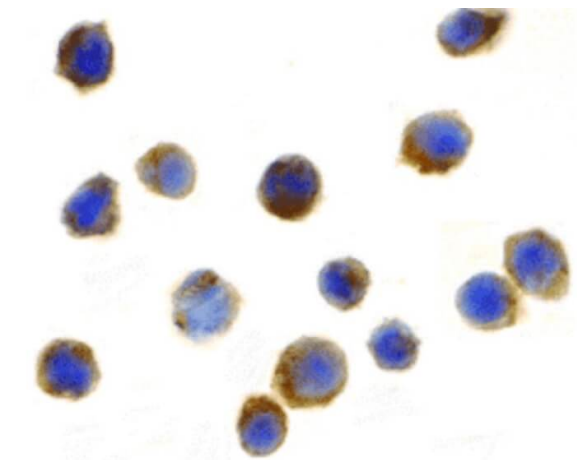
### Western Blot

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**

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.