Rabbit Tuberin/TSC2 Polyclonal Antibody | anti-TSC2 antibody

Phospho-Tuberin/TSC2 (Ser981) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329846	**Rabbit**	**Human, Mouse, RatPredicted Reactivity: Bovine (100%), Horse (100%), Sheep (100%)**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

Tuberin/TSC2; Polyclonal Antibody; Phospho-Tuberin/TSC2 (Ser981) Antibody; FLJ43106; LAM; OTTHUMP00000158940; OTTHUMP00000198394; OTTHUMP00000198395; PPP1R160; Protein phosphatase 1; regulatory subunit 160; tsc2; TSC2_HUMAN; TSC4; TSC4 gene; formerly; Tuberin; Tuberous sclerosis 2; Tuberous sclerosis 2 protein; Tuberous sclerosis 2 protein homolog; anti-TSC2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Bovine (100%), Horse (100%), Sheep (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Tuberin/TSC2 (Ser981) Antibody detects endogenous levels of Tuberin/TSC2 only when phosphorylated at Ser981. Tissue Specificity: Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-TSC2 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Tuberin/TSC2 around the phosphorylation site of Ser981.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylation at Ser-1387, Ser-1418 or Ser-1420 does not affect interaction with TSC1. Phosphorylation at Ser-939 and Thr-1462 by PKB/AKT1 is induced by growth factor stimulation. Phosphorylation by AMPK activates it and leads to negatively regulates the mTORC1 complex. Phosphorylated at Ser-1798 by RPS6KA1; phosphorylation inhibits TSC2 ability to suppress mTORC1 signaling. Phosphorylated by DAPK1.Ubiquitinated by the DCX (FBXW5) E3 ubiquitin-protein ligase complex, leading to its subsequent degradation. Ubiquitinated by MYCBP2 independently of its phosphorylation status leading to subsequent degradation; association with TSC1 protects from ubiquitination.

Subunit Structure	Probably forms a complex composed of chaperones HSP90 and HSP70, co-chaperones STIP1/HOP, CDC37, PPP5C, PTGES3/p23, TSC1 and client protein TSC2. Probably forms a complex composed of chaperones HSP90 and HSP70, co-chaperones CDC37, PPP5C, TSC1 and client protein TSC2, CDK4, AKT, RAF1 and NR3C1; this complex does not contain co-chaperones STIP1/HOP and PTGES3/p23. Forms a complex containing HSP90AA1, TSC1 and TSC2; TSC1 is required to recruit TCS2 to the complex thereby stabilizing TSC2. Interacts with TSC1 and HERC1; the interaction with TSC1 stabilizes TSC2 and prevents the interaction with HERC1. May also interact with the adapter molecule RABEP1. The final complex may contain TSC2 and RABEP1 linked to RAB5. Interacts with HSPA1 and HSPA8. Interacts with DAPK1. Interacts with FBXW5. Interacts with NAA10 (via C-terminal domain). Interacts with RRAGA (polyubiquitinated). Interacts with WDR45B. Interacts with RPAP3 and URI1. (Microbial infection) Interacts with human cytomegalovirus protein UL38; this interaction inhibits cellular stress response mediated by mTORC1.
Subcellular Location	Cytoplasm. Membrane>Peripheral membrane protein. Note: At steady state found in association with membranes.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data
At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



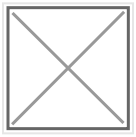
IHC (Immunohistochemistry)
At 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemisry)
At 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)
Staining Rat kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of Tuberin (Phospho-Ser981) using HepG2 whole cell lysates.-/+ means absence or presence of N peptideï¼ˆnon-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-TSC2 antibody	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. Acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1. 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).

NCBI AND UNIPROT INFORMATION

NCBI GI #	116256352
NCBI GeneID	7249
NCBI Accession #	NP_000539.2

NCBI GenBank Nucleotide #	NM_000548.3
UniProt Accession #	P49815; O75275; Q4LE71; Q8TAZ1; A7E2E2; B4DIQ7; B4DRN2; C9J378
Molecular Weight	200,608 Da
NCBI Official Full Name	tuberin isoform 1
NCBI Official Synonym Full Names	tuberous sclerosis 2
NCBI Official Symbol	TSC2
NCBI Official Synonym Symbols	LAM; TSC4
NCBI Protein Information	tuberin; tuberous sclerosis 2 protein
UniProt Protein Name	Tuberin
UniProt Gene Name	**TSC2**
UniProt Synonym Gene Names	TSC4
UniProt Entry Name	TSC2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: https://stage.aaabiotech.com/polyclonal/tuberin-tsc2-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/329846