ARG56162
anti-TSC2 / Tuberin antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes TSC2 / Tuberin
Tested Reactivity	Hu
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	TSC2 / Tuberin
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 1776-1805 of Human Tuberin.
Conjugation	Un-conjugated
Alternate Names	PPP1R160; LAM; TSC4; Tuberin; Tuberous sclerosis 2 protein

Application Instructions

Application table

Application	Dilution
ICC/IF	1:10 - 1:50
IHC-P	1:10 - 1:50
WB	1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Positive Control: PC-3

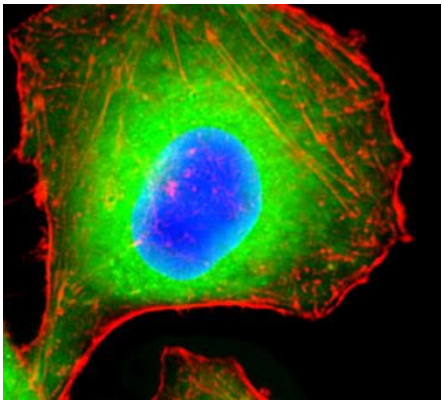
Properties

Form	Liquid
Purification	Purification with Protein A and immunogen peptide.
Buffer	PBS and 0.09% (W/V) Sodium azide.
Preservative	0.09% (W/V) Sodium azide.
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

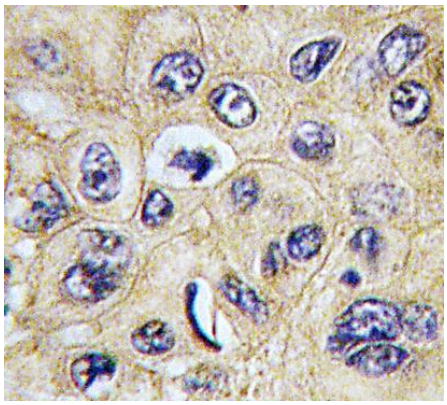
Database links	GeneID: 7249 Human Swiss-port # P49815 Human
Gene Symbol	TSC2
Gene Full Name	tuberous sclerosis 2
Background	Mutations in this gene lead to tuberous sclerosis complex. Its gene product is believed to be a tumor suppressor and is able to stimulate specific GTPases. The protein associates with hamartin in a cytosolic complex, possibly acting as a chaperone for hamartin. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]
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. 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. Also stimulates the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5. [UniProt]
Calculated Mw	201 kDa
PTM	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.
Cellular Localization	Cytoplasm. Membrane; Peripheral membrane protein. Note=At steady state found in association with membranes

Images



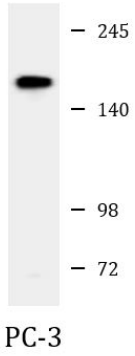
ARG56162 anti-TSC2 / Tuberin antibody ICC/IF image

Immunofluorescence: HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then stained with ARG56162 anti-TSC2 / Tuberin antibody (green) at 1:25 dilution, 1 hour at 37°C. Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7 units/ml, 1 hour at 37°C). DAPI (blue) for nuclear staining.



ARG56162 anti-TSC2 / Tuberin antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human hepatocarcinoma tissue stained with ARG56162 anti-TSC2 / Tuberin antibody.



ARG56162 anti-TSC2 / Tuberin antibody WB image

Western blot: 35 µg of PC-3 cell lysate stained with ARG56162 anti-TSC2 / Tuberin antibody at 1:1000 dilution.