10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

Tuberin (TSC2) Antibody (S1798)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP6348D

Specification

Tuberin (TSC2) Antibody (S1798) - Product Information

Application	IF, WB, IHC-P,E
Primary Accession	P49815
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	1776-1805

Tuberin (TSC2) Antibody (S1798) - Additional Information

Gene ID 7249

Other Names
Tuberin, Tuberous sclerosis 2 protein, TSC2, TSC4

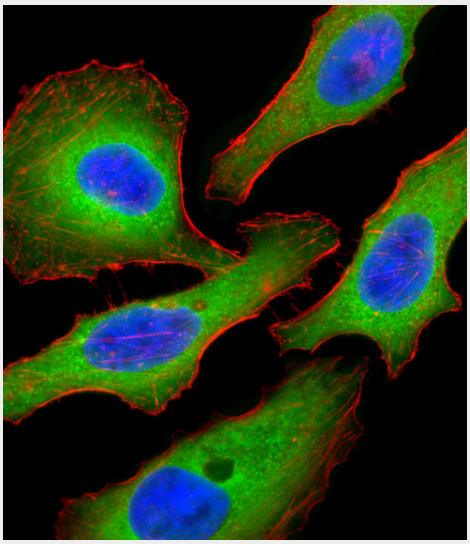
Target/Specificity
This Tuberin (TSC2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1776-1805 amino acids from human Tuberin (TSC2).

Dilution
IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Tuberin (TSC2) Antibody (S1798) is for



Fluorescent confocal image of Hela cell stained with Tuberin (TSC2) Antibody (S1798)(Cat#AP6348d).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with Tuberin (TSC2) primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).Tuberin (TSC2) immunoreactivity is localized to Cytoplasm significantly.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

research use only and not for use in diagnostic or therapeutic procedures.

Tuberin (TSC2) Antibody (S1798) - Protein Information

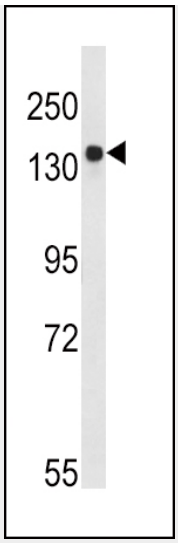
Name TSC2

Synonyms TSC4

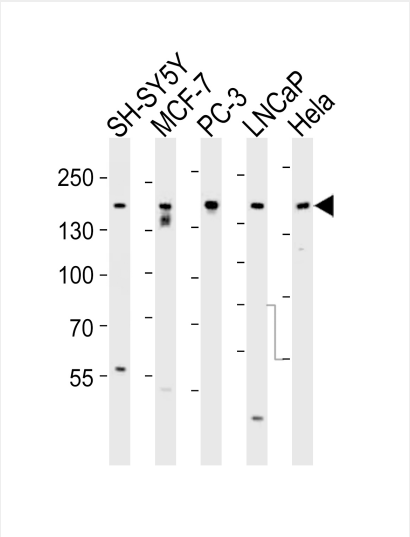
Function
In complex with TSC1, this tumor suppressor inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling (PubMed:12271141, PubMed:28215400). Acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (PubMed:15340059). 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).

Cellular Location
Cytoplasm. Membrane; Peripheral membrane protein. Note=At steady state found in association with membranes

Tissue Location
Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta



Western blot analysis of TSC2-pS1798 (Cat. #AP6348d) in Ramos cell line lysates (35ug/lane). TSC2 (arrow) was detected using the purified Pab.



Western blot analysis of lysates from SH-SY5Y, MCF-7, PC-3, LNCaP, Hela, cell line (from left to right), using Tuberin (TSC2) Antibody(Cat. #AP6348d). AP6348d was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

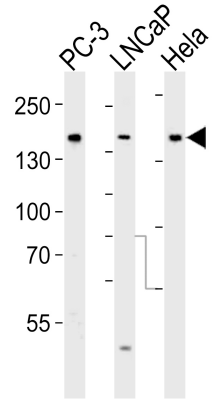
Tuberin (TSC2) Antibody (S1798) - Protocols

Provided below are standard protocols that you may find useful for product applications.

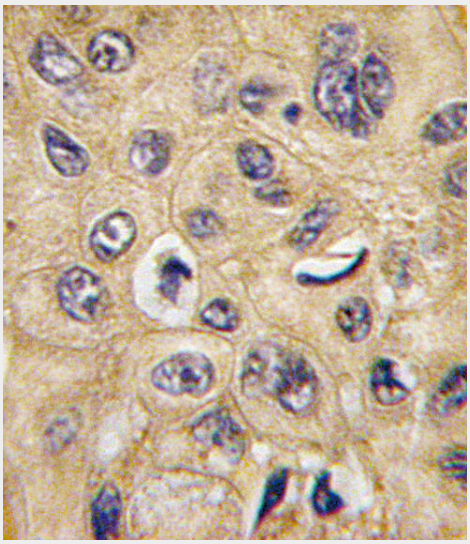
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

- Flow Cytomety
- Cell Culture



Western blot analysis of lysates from PC-3, LNCaP, Hela cell line (from left to right), using Tuberin (TSC2) Antibody(Cat. #AP6348d). AP6348d was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with TSC2 Antibody (S1798) (Cat.#AP6348d), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Tuberin (TSC2) Antibody (S1798) - Background

Mutations in TSC2 lead to tuberous sclerosis

complex. This protein is believed to be a tumor suppressor and is able to specifically stimulate the intrinsic GTPase activity of the Ras-related protein RAP1A and RAB5. TSC2 associates with hamartin in a cytosolic complex, possibly acting as a chaperone for hamartin. It may have a function in vesicular transport, but may also play a role in the regulation of cell growth arrest and in the regulation of transcription mediated by steroid receptors. Interaction between TSC1 and TSC2 may facilitate vesicular docking.

Tuberin (TSC2) Antibody (S1798) - References

Li, Y., et al., Mol. Cell. Biol. 24(18):7965-7975 (2004).
Karbowniczek, M., et al., J. Biol. Chem. 279(29):29930-29937 (2004).
Corradetti, M.N., et al., Genes Dev. 18(13):1533-1538 (2004).
Birchenall-Roberts, M.C., et al., J. Biol. Chem. 279(24):25605-25613 (2004).
Lewis, J.C., et al., J. Med. Genet. 41(3):203-207 (2004).