For Research Use Only

Tuberin/TSC2 Polyclonal antibody

Catalog Number:24601-1-AP Featured Product 12 Publications

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Basic Information

Catalog Number:
24601-1-AP

Size:
150ul , Concentration: 550 ug/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG18133

GenBank Accession Number:
BC150300

GeneID (NCBI):
7249

UNIPROT ID:
P49815

Full Name:
tuberous sclerosis 2

Calculated MW:
1807 aa, 201 kDa

Observed MW:
200 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:1000-1:8000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC: 1:400-1:1600
IF/ICC: 1:200-1:800
FC (Intra): 0.40 ug per 10^6 cells in a 100 µl suspension

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), IP, ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : HEK-293 cells, HeLa cells, PC-3 cells, mouse brain tissue, rat brain tissue, K-562 cells

IP : SH-SY5Y cells,

IHC : mouse brain tissue, human pancreas tissue

IF/ICC : HEK-293 cells,

FC (Intra) : HeLa cells,

Background Information

TSC2, also named as TSC4, FLJ43106 and LAM, acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1. In complex with TSC1, TSC2 inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling. TSC2 implicated as a tumor suppressor. It is involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling. TSC2 stimulates weakly the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 in vitro. Mutations in TSC2 lead to constitutive activation of RAP1A in tumors. Mutations in either TSC2 or the related TSC1 (hamartin) gene cause tuberous sclerosis complex (TSC), an autosomal dominant disorder characterized by development of multiple, widespread non-malignant tumors.

Notable Publications

Author	Pubmed ID	Journal	Application
Changxiao Hu	34326874	J Oncol	WB
Chenzhong Xu	40441158	Mol Cell	WB,IF
Han Chen	39674178	Cell	IHC

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
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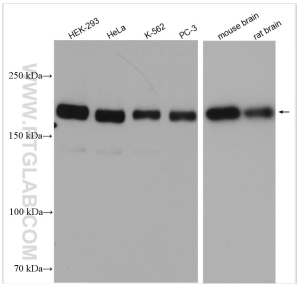
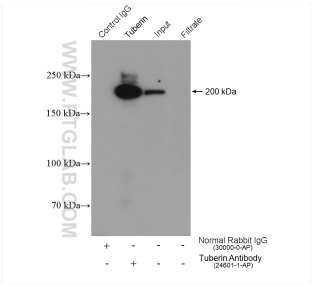
E: proteintech@ptglab.com
W: ptglab.com

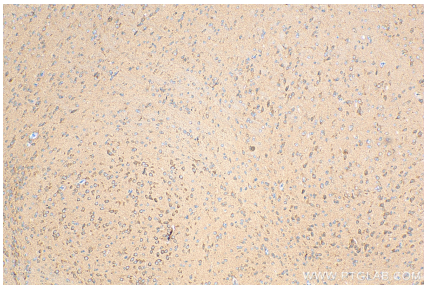
Selected Validation Data



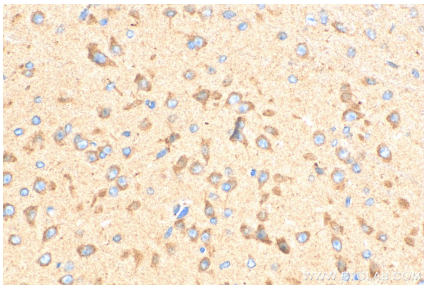
Various lysates were subjected to SDS PAGE followed by western blot with 24601-1-AP (Tuberin antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.



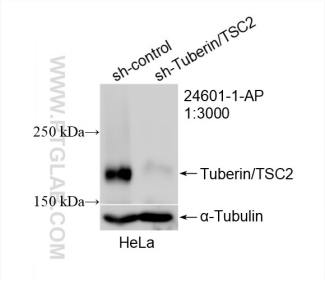
IP result of anti-Tuberin/TSC2 (IP:24601-1-AP, 4ug; Detection:24601-1-AP 1:1000) with SH-SY5Y cells lysate 1080 ug.



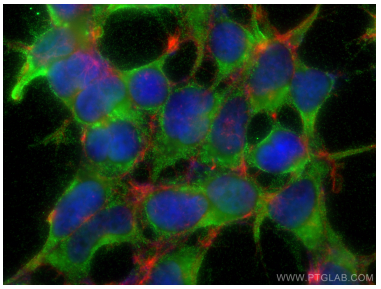
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 24601-1-AP (Tuberin antibody) at dilution of 1:800 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



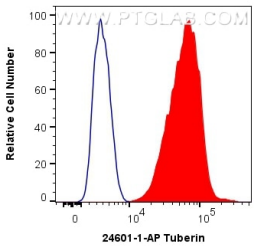
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 24601-1-AP (Tuberin antibody) at dilution of 1:800 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



WB result of Tuberin/TSC2 antibody (24601-1-AP; 1:3000; incubated at room temperature for 1.5 hours) with sh-Control and sh-Tuberin/TSC2 transfected HeLa cells.



Immunofluorescent analysis of (-20°C Ethanol) fixed HEK-293 cells using Tuberin/TSC2 antibody (24601-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).



1X10^6 HeLa cells were intracellularly stained with 0.4 ug Anti-Human Tuberin (24601-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer.