

Basic Information

Product Name	Anti-Hamartin/TSC1 Antibody	
Gene Name	TSC1	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human	
Tested Application	WB, IHC, ICC/IF, FCM, ELISA	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	E.coli-derived human Hamartin/TSC1 recombinant protein (Position: M1-H618).	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	150 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 Enzyme linked immunosorbent assay (ELISA): 1:100-1000 (Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

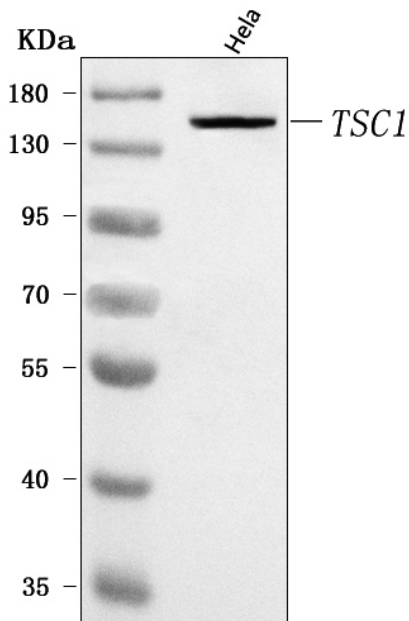
Storage

12 months from date of receipt, -20°C as supplied.

Background Information

Hamartin also known as tuberous sclerosis 1 is a protein that in humans is encoded by the TSC1 gene. It is mapped to 9q34.13. This peripheral membrane protein was implicated as a tumor suppressor. It forms a complex with TSC2 that regulates mTORC1 signaling and may be also involved in vesicular transport and docking. Hamartin and TSC2 have critical roles in neuronal polarity, and that a common pathway regulates polarization and growth in neurons and cell size in other tissues. Hamartin is a growth inhibitory protein whose biologic effect is probably dependent on its interaction with tuberin. It also can affect cell proliferation via deregulation of G1 phase. Loss or perturbation of Hamartin function leads to loss of adhesion to the cellular matrix and initiates the development of TSC hamartomas.

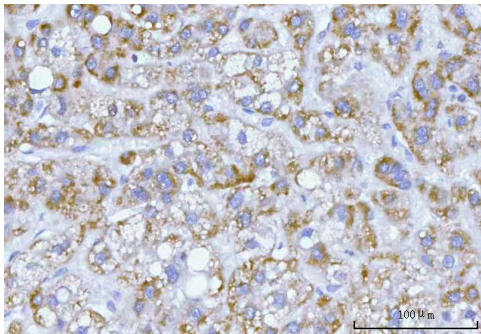
Selected Validation Data



Western blot analysis of anti-Hamartin/TSC1 antibody (A00365-2). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

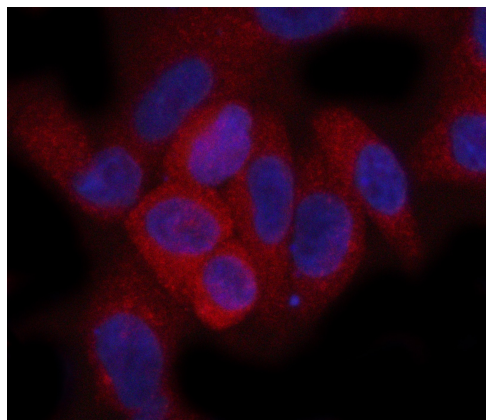
Lane 1: human Hela whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-Hamartin/TSC1 antigen affinity purified polyclonal antibody (A00365-2) and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Hamartin/TSC1 at approximately 160 kDa. The expected band size for Hamartin/TSC1 is at 130 kDa.



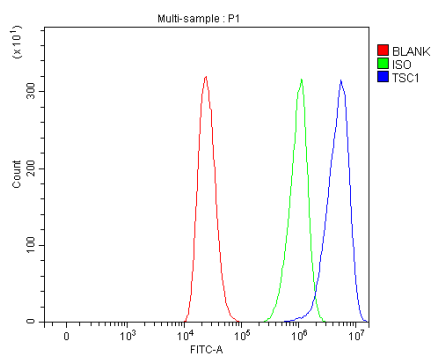
IHC analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2).

Hamartin/TSC1 was detected in a paraffin-embedded section of human liver cancer tissue. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB (Catalog # AR1027) as the chromogen.



IF analysis of Hamartin/TSC1 using anti-Hamartin/TSC1 antibody (A00365-2).

Hamartin/TSC1 was detected in an immunocytochemical section of A549 cells. Cy3-conjugated Anti-rabbit IgG Secondary Antibody (red)(Catalog#BA1032) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of THP-1 cells using anti-Hamartin/TSC1 antibody (A00365-2).

Overlay histogram showing THP-1 cells stained with A00365-2 (Blue line).

To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Hamartin/TSC1 Antibody (A00365-2) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.