

Anti-Tuberin TSC2 Antibody Picoband™ (monoclonal, 6I3)

Catalog Number: M00229-1

About TSC2

Tuberous sclerosis 2 protein, also known as TSC2 or Tuberin is a protein that is in humans. The chromosomal location of this gene is 16p13.3. 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. This gene involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling. It stimulates weakly the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 in vitro.

Overview

Product Name	Anti-Tuberin TSC2 Antibody Picoband™ (monoclonal, 6I3)
Reactive Species	Human
Description	Boster Bio Anti-Tuberin TSC2 Antibody Picoband™ (monoclonal, 6I3) catalog # M00229-1. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human.
Application	Flow Cytometry, IHC, WB
Clonality	Monoclonal 6I3
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Mouse
Uniprot ID	P49815

Technical Details

Immunogen	E.coli-derived human Tuberin recombinant protein (Position: H1611-V1807). Human Tuberin shares 94% and 90% amino acid (aa) sequence identity with mouse and rat Tuberin, respectively.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	0

Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-Tuberin TSC2 Antibody Picoband™ (monoclonal, 6I3) (M00229-1) Images

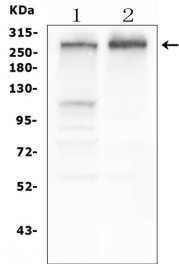


Figure 1. Western blot analysis of TSC2 using anti-TSC2 antibody (M00229-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human HEK293 tissue lysates,

Lane 2: human PC-3 whole cell lysates,

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-TSC2 antigen affinity purified polyclonal antibody (Catalog # M00229-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for TSC2 at approximately 280KD. The expected band size for TSC2 is at 201KD.

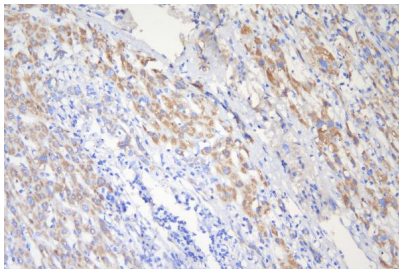


Figure 2. IHC analysis of TSC2 using anti-TSC2 antibody (M00229-1).

TSC2 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml mouse anti-TSC2 Antibody (M00229-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

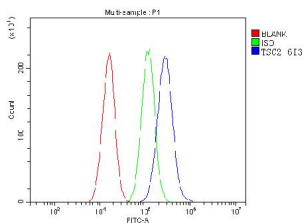


Figure 3. Flow Cytometry analysis of A549 cells using anti-TSC2 antibody (M00229-1).

Overlay histogram showing A549 cells stained with M00229-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-TSC2 Antibody (M00229-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight® 488 conjugated goat anti-mouse IgG (BA1126, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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