

Anti-Beta Tubulin/TUBB Antibody Picoband™

Catalog Number: A01857-1

About TUBB

Tubulin beta chain is a protein that in humans is encoded by the TUBB gene. This gene encodes a beta tubulin protein. This protein forms a dimer with alpha tubulin and acts as a structural component of microtubules. Mutations in this gene cause cortical dysplasia, complex, with other brain malformations 6. Alternative splicing results in multiple splice variants. There are multiple pseudogenes for this gene on chromosomes 1, 6, 7, 8, 9, and 13.

Overview

Product Name	Anti-Beta Tubulin/TUBB Antibody Picoband™
Reactive Species	Chicken, Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-Beta Tubulin/TUBB Antibody Picoband™ catalog # A01857-1. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat, Chicken.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
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	Rabbit
Uniprot ID	P07437

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Beta Tubulin, identical to the related mouse and rat sequences.
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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, Monkey, Mouse, Rat, Chicken Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry(Fixed), 1-3ug/1x10⁶ cells, Human

Anti-Beta Tubulin/TUBB Antibody Picoband™ (A01857-1) Images

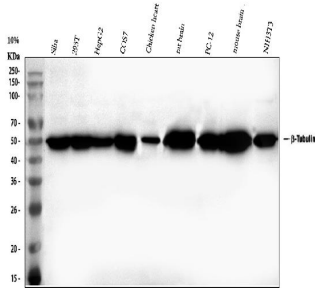


Figure 1. Western blot analysis of Beta Tubulin using anti-Beta Tubulin antibody (A01857-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human SiHa whole cell lysates,
Lane 2: human 293T whole cell lysates,
Lane 3: human HepG2 whole cell lysates,
Lane 4: monkey COS-7 whole cell lysates,
Lane 5: chicken heart tissue lysates,
Lane 6: rat brain tissue lysates,
Lane 7: rat PC-12 whole cell lysates,
Lane 8: mouse brain tissue lysates,
Lane 9: mouse NIH/3T3 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Beta Tubulin antigen affinity purified polyclonal antibody (Catalog # A01857-1) 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-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Beta Tubulin at approximately 50 kDa. The expected band size for Beta Tubulin is at 50 kDa.

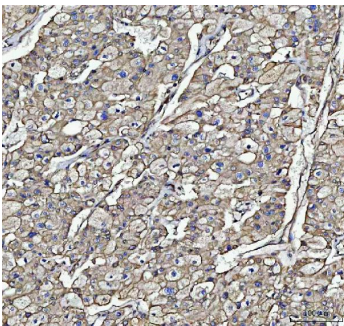
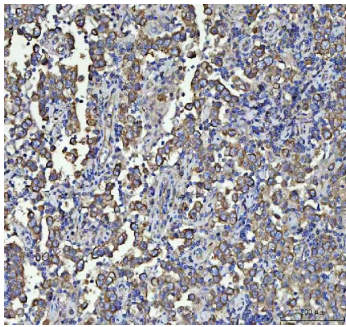


Figure 2. IHC analysis of Beta Tubulin using anti-Beta Tubulin antibody (A01857-1).

Beta Tubulin 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 2 ug/ml rabbit anti-Beta Tubulin Antibody (A01857-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 3. IHC analysis of Beta Tubulin using anti-Beta Tubulin antibody (A01857-1).

Beta Tubulin was detected in a paraffin-embedded section of human testicular germ cell tumor 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 2 ug/ml rabbit anti-Beta Tubulin Antibody (A01857-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit



IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

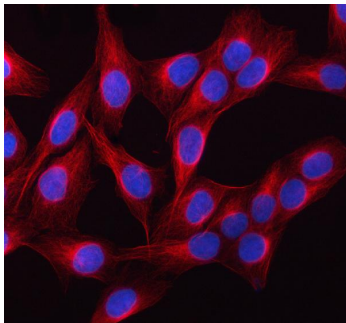


Figure 4. IF analysis of Beta Tubulin using anti-Beta Tubulin antibody (A01857-1).

Beta Tubulin was detected in an immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Beta Tubulin Antibody (A01857-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

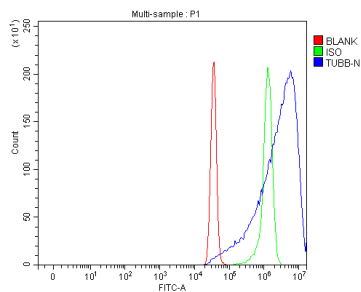


Figure 5. Flow Cytometry analysis of SiHa cells using anti-Beta Tubulin antibody (A01857-1).

Overlay histogram showing SiHa cells stained with A01857-1 (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-Beta Tubulin Antibody (A01857-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

7 Publications Citing This Product

1. PubMed ID: 10.1016/j.acthis.2017.10.008, Stemness distinctions between the ectomesenchymal stem cells from neonatal and adult mice
2. PubMed ID: 31933182, Shan W,Han F,Xu Y,Shi Y.Stathmin Regulates Spatiotemporal Variation in the Memory Loop in Single-Prolonged Stress Rats. J Mol Neurosci. 2020 Apr;70(4):576-589.doi: 10.1007/s12031-019-01459-w.Epub 2020 Jan 13.PMID: 31933182.
3. PubMed ID: 32201510, Hu X,Lu E,Pan C,Xu Y,Zhu X.Overexpression and biological function of PRDX6 in human cervical cancer.J Cancer.2020 Feb 10;11(9):2390-2400.doi:10.7150/jca.39892.PMID:32201510;PMCID:PMC7066013.

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