

Anti-Beta Tubulin Antibody Picoband™(monoclonal, 5E4)

Catalog Number: M01857-3

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 Antibody Picoband™(monoclonal, 5E4)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Beta Tubulin Antibody Picoband™ (monoclonal, 5E4) catalog # M01857-3. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, ICC, WB
Clonality	Monoclonal 5E4
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	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.
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 ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
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, Mouse, Rat

Immunocytochemistry/Immunofluorescence, 2ug/ml, Human

Flow Cytometry, 1-3ug/ 1×10^6 cells, Human

Anti-Beta Tubulin Antibody Picoband™(monoclonal, 5E4) (M01857-3) Images

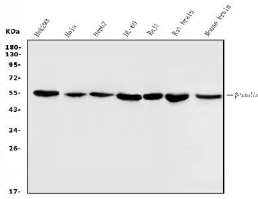


Figure 1. Western blot analysis of Beta Tubulin using anti-Beta Tubulin antibody (M01857-3).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human HEK293 whole cell lysates,
Lane 2: human Hela whole cell lysates,
Lane 3: human HEPG2 whole cell lysates,
Lane 4: human HL-60 whole cell lysates,
Lane 5: human Raji whole cell lysates,
Lane 6: rat brain tissue lysates,
Lane 7: mouse brain tissue 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-Beta Tubulin antigen affinity purified monoclonal antibody (Catalog # M01857-3) 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 Beta Tubulin at approximately 55KD. The expected band size for Beta Tubulin is at 55KD.

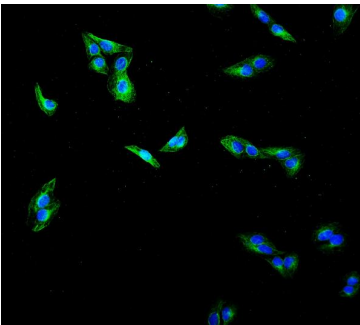


Figure 2. IF analysis of Beta Tubulin using anti-Beta Tubulin antibody (M01857-3).
Beta Tubulin was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Beta Tubulin Antibody (M01857-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) 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.

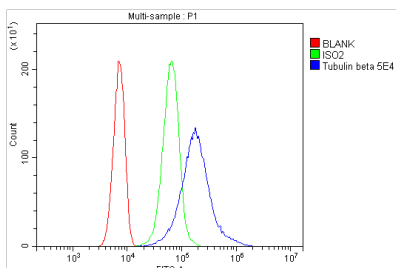


Figure 3. Flow Cytometry analysis of SiHa cells using anti-Beta Tubulin antibody (M01857-3).
Overlay histogram showing SiHa cells stained with M01857-3 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Beta Tubulin Antibody (M01857-3, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

6 Publications Citing This Product

1. PubMed ID: 30554401, Shen X,Zhang J,Zhang X,Wang Y,Hu Y,Guo J.Retinoic Acid-Induced Protein 14 (RAI14) Promotes mTOR-Mediated Inflammation Under Inflammatory Stress and Chemical Hypoxia in a U87 Glioblastoma Cell Line.Cell Mol Neurobiol.2019 Mar;39(2):241-254.doi:10.1007/s10571-018-0644-z.Epub 2018 Dec 15.PMID:30554401.

2. PubMed ID: -, Han Zhang,Huaishan Wang,Fei Gao,Jia Yang,Yi Xu,Yi Fu,Menghua Cai,Xue Zhang,Qi Yang,Kexin Tong,Yu Hu,Hui Chen,Chao Ma,Wei He,Jianmin Zhang,TSPO Deficiency Accelerates Amyloid Pathology and Neuroinflammation by Impairing Microglial Phagocytosis,Neurobiology of Aging,2021,,ISSN 0197-4580,https://doi.org/10.1016/j.neurobiolaging.2021.06.020.

3. PubMed ID: -, Yu Jiao,Ran Hu,Sirong Hu,Binge Wang,Dehong Huang,Zhou Lan,Shenrong Wuzi Pill affects the pathway of thyroid hormone synthesis by targeting thyrotropin-releasing hormone receptor and altering cAMP production,Journal of Herbal Medicine,2021,100470,ISSN 2210-8033,https://doi.org/10.1016/j.hermed.2021.100470.

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