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antibody and ELISA experts

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# Anti-Beta Tubulin TUBB Antibody Picoband™ (monoclonal, 2E11)

**Catalog Number:** M05613-4

## 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

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|---|---|
| Product Name | Anti-Beta Tubulin TUBB Antibody Picoband™ (monoclonal, 2E11) |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Beta Tubulin TUBB Antibody Picoband™ (monoclonal, 2E11) catalog # M05613-4. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. |
| Application | Flow Cytometry, IF, ICC, WB |
| Clonality | Monoclonal 2E11 |
| Formulation | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg $Na_2HPO_4$, 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

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| 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 IgG2a |
| Form | Lyophilized |
| Concentration | 0 |
| Suggested Dilutions | Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. |

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|---|---|
| | If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.<br>Some PubMed article(s) citing the expression level of this target are as follows:<br>Boster Bio's internal QC testing used:<br>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat<br>Immunocytochemistry/Immunofluorescence,2ug/ml,Human<br>Flow Cytometry, 1-3ug/1x$10^6$ cells, Human |

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# Anti-Beta Tubulin TUBB Antibody Picoband™ (monoclonal, 2E11) (M05613-4) Images

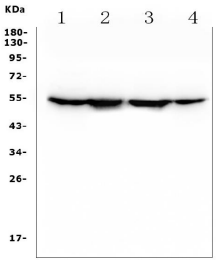


Figure 1. Western blot analysis of Tubulin beta using anti-Tubulin beta antibody (M05613-4).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human HEK293 tissue lysates,
Lane 2: monkey COS-7 whole cell lysates,
Lane 3: human PC-3 whole cell lysates,
Lane 4: human Hela 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-IL-32 antigen affinity purified polyclonal antibody (Catalog # M05613-4) 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 Tubulin beta at approximately 55KD. The expected band size for Tubulin beta is at 55KD.

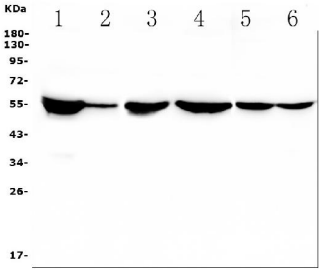


Figure 2. Western blot analysis of Tubulin beta using anti-Tubulin beta antibody (M05613-4).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat brain tissue lysates,
Lane 2: rat liver whole cell lysates,
Lane 3: rat PC-12 whole cell lysates,
Lane 4: mouse brain whole cell lysates,
Lane 5: mouse NIH3T3, whole cell lysates,
Lane 6: mouse RAW264.7 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-IL-32 antigen affinity purified polyclonal antibody (Catalog # M05613-4) 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 Tubulin beta at approximately 55KD. The expected band size for Tubulin beta is at 55KD.

Figure 3. IF analysis of Tubulin beta using anti-Tubulin beta

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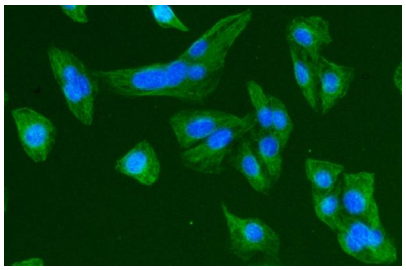

antibody (M05613-4).
Tubulin beta was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Tubulin beta Antibody (M05613-4) 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.

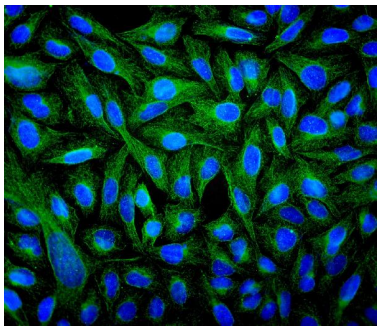

Figure 4. IF analysis of Tubulin beta using anti-Tubulin beta antibody (M05613-4).
Tubulin beta was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Tubulin beta Antibody (M05613-4) 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.

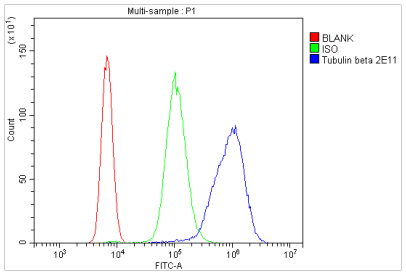


Figure 5. Flow Cytometry analysis of U937 cells using anti-Tubulin beta antibody M05613-4).
Overlay histogram showing U937 cells stained with M05613-4 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Tubulin beta Antibody (M05613-4, 1ug/1x$10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x$10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x$10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

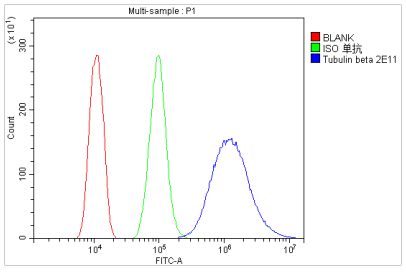


Figure 6. Flow Cytometry analysis of HEPA1-6 cells using anti-Tubulin beta antibody M05613-4).
Overlay histogram showing HEPA1-6 cells stained with M05613-4 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Tubulin beta Antibody (M05613-4, 1ug/1x$10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x$10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x$10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Figure 7. IF analysis of Tubulin beta using anti-Tubulin beta antibody (M05613-4) and anti-FOSB antibody (A01569-1).
Tubulin beta was detected in immunocytochemical section

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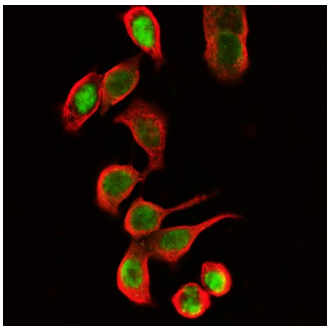

of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL mouse anti-Tubulin beta Antibody (M05613-4) and rabbit anti-FOSB antibody (A01569-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Mouse IgG (BA1141) and DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) were used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

## 10 Publications Citing This Product

1. PubMed ID: 10.3390/ijms21093321, Niacin Alleviates Dairy Cow Mastitis by Regulating the GPR109A/AMPK/NRF2 Signaling Pathway

2. 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.

3. 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.

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