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

Catalog # ABO14910

Specification

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

Application	**WB, IF, ICC, FC**
Primary Accession	P07437
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-Beta Tubulin Antibody Picoband™ (monoclonal, 5E4) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

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

Gene ID 203068

Other Names
Tubulin beta chain, Tubulin beta-5 chain, TUBB, TUBB5

Calculated MW
55 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
 Immunocytochemistry/Immunofluorescence, 2 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Beta Tubulin, identical to the related mouse and rat sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross-reactivity with other proteins.

Storage	**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.

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

Name TUBB

Synonyms TUBB5

Function
Tubulin is the major constituent of microtubules, a cylinder consisting of laterally associated linear protofilaments composed of alpha- and beta-tubulin heterodimers. Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms. Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin.

Cellular Location
Cytoplasm, cytoskeleton

Tissue Location
Ubiquitously expressed with highest levels in spleen, thymus and immature brain.

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

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

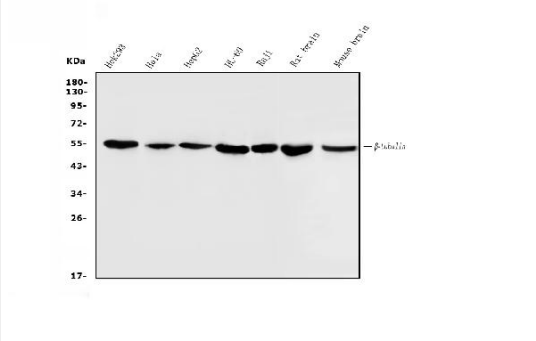

Figure 1. Western blot analysis of Beta Tubulin using anti-Beta Tubulin antibody (M01857-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: 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 µg/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.

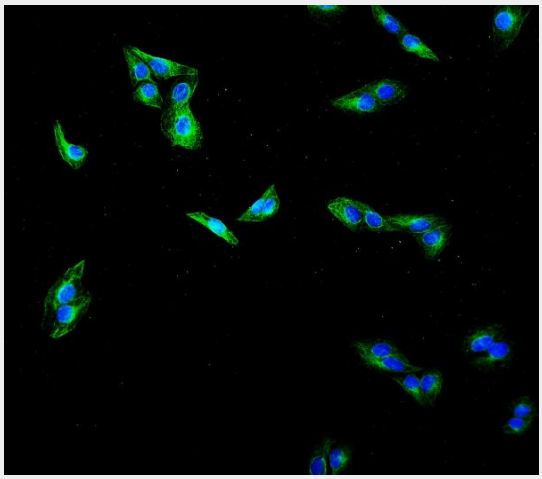

Figure 2. IF analysis of Beta Tubulin using anti-Beta Tubulin antibody (M01857-3).
Beta Tubulin was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2 µg/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.

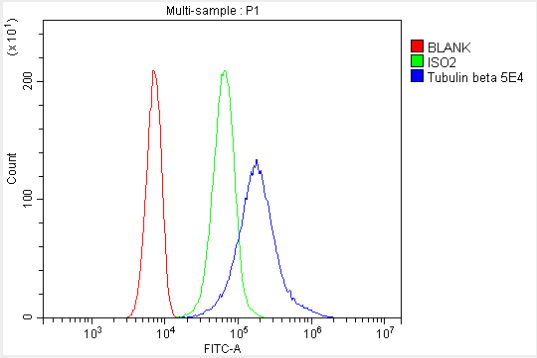

Figure 3. Flow Cytometry analysis of SiHa cells using anti-Beta Tubulin antibody (M01857-3).
Overlay histogram showing SiHa cells stained with M01857-3 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Beta Tubulin Antibody (M01857-3, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype

control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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

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.