Anti-beta Tubulin Antibody [1-B11-R] - BSA and Azide free

HA610049

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 50 kDa
Clone number:	1-B11-R

Description: Tubulin in molecular biology can refer either to the tubulin protein superfamily of globular proteins, or one of the member proteins of that superfamily. α- and β-tubulins polymerize into microtubules, a major component of the eukaryotic cytoskeleton. Microtubules function in many essential cellular processes, including mitosis. Tubulin-binding drugs kill cancerous cells by inhibiting microtubule dynamics, which are required for DNA segregation and therefore cell division. In eukaryotes, there are six members of the tubulin superfamily, although not all are present in all species. Both α and β tubulins have a mass of around 50 kDa and are thus in a similar range compared to actin (with a mass of ~42 kDa). In contrast, tubulin polymers (microtubules) tend to be much bigger than actin filaments due to their cylindrical nature. Tubulin was long thought to be specific to eukaryotes. More recently, however, several prokaryotic proteins have been shown to be related to tubulin.

Immunogen: Synthetic peptide within human Beta tubulin aa 51-100.

Positive control: HeLa cell lysate, MCF7 cell lysate, NCCIT cell lysate, PC-12 cell lysate, F9 cell lysate, NIH/3T3 cell lysate, HeLa, NIH/3T3, human spleen tissue, mouse brain tissue, rat testis tissue.

Subcellular location: Cytoplasm ,cytoskeleton

Database links: SwissProt: P07437 Human | P99024 Mouse | P69897 Rat

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:100
IHC-P	1:20

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

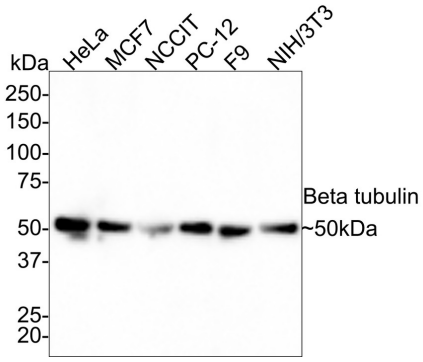

Fig1: Western blot analysis of beta Tubulin on different lysates with Mouse anti-beta Tubulin antibody (HA610049) at 1/5,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: MCF7 cell lysate
Lane 3: NCCIT cell lysate
Lane 4: PC-12 cell lysate
Lane 5: F9 cell lysate
Lane 6: NIH/3T3 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 50 kDa
Observed band size: 50 kDa

Exposure time: 2 minutes;

10% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA610049) at 1/5,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:150,000 dilution was used for 1 hour at room temperature.

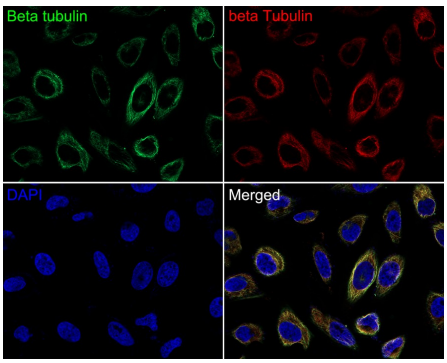

Fig2: Immunocytochemistry analysis of HeLa cells labeling beta Tubulin with Mouse anti-beta Tubulin antibody (HA610049) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Mouse anti-beta Tubulin antibody (HA610049) at 1/100 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

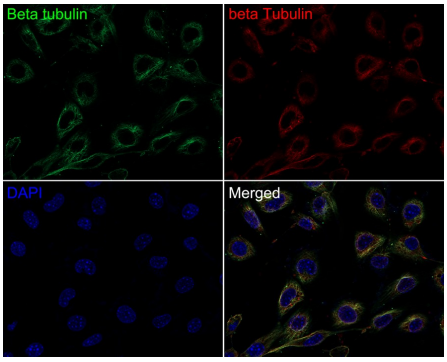

Fig3: Immunocytochemistry analysis of NIH/3T3 cells labeling beta Tubulin with Mouse anti-beta Tubulin antibody (HA610049) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Mouse anti-beta Tubulin antibody (HA610049) at 1/100 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

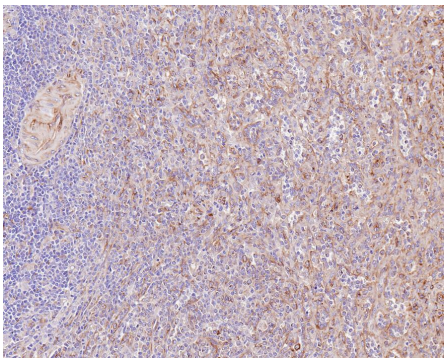

Fig4: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Mouse anti-beta Tubulin antibody (HA610049) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610049) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

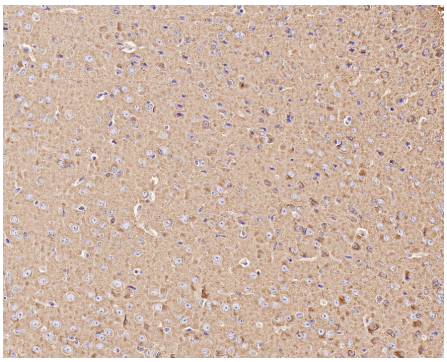

Fig5: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Mouse anti-beta Tubulin antibody (HA610049) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610049) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

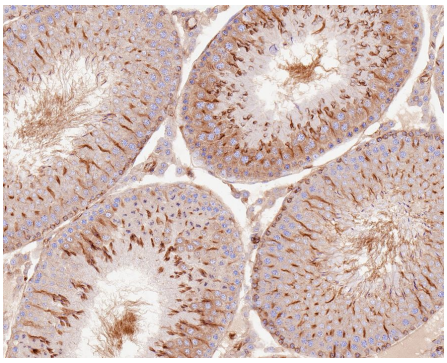

Fig6: Immunohistochemical analysis of paraffin-embedded rat testis tissue with Mouse anti-beta Tubulin antibody (HA610049) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610049) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. "Evolutionary history of a multigene family: an expressed human beta-tubulin gene and three processed pseudogenes." Lee M.G.-S., Lewis S.A., Wilde C.D., Cowan N.J. Cell 33:477-487(1982)
2. "Tubulins in the primate retina: evidence that xanthophylls may be endogenous ligands for the paclitaxel-binding site." Crabtree D.V., Ojima I., Geng X., Adler A.J. Bioorg. Med. Chem. 9:1967-1976(2000)
3. "Mutations in the beta-tubulin gene TUBB5 cause microcephaly with structural brain abnormalities." Breuss M., Heng J.I., Poirier K., Tian G., Jaglin X.H., Qu Z., Braun A., Gstrein T., Ngo L., Haas M., Bahi-Buisson N., Moutard M.L., Passemard S., Verloes A., Gressens P., Xie Y., Robson K.J., Rani D.S. Cell Rep. 2:1554-1562(2011)