Anti-beta Tubulin Antibody [1-B11-R]

HA601147

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	1:200-1,000

Storage Buffer: 1*TBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

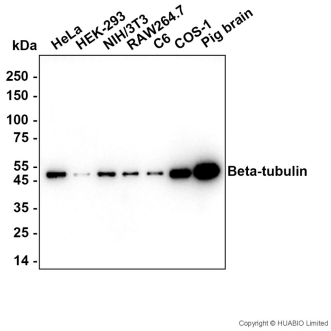

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Fig1: Western blot analysis of beta Tubulin on different lysates with Rabbit anti-beta Tubulin antibody (HA601147) at 1/10,000 dilution.

Lane 1: HeLa (Human cervical adenocarcinoma cell) cell lysate
Lane 2: HEK-293 (Human embryonic kidney cell) cell lysate
Lane 3: NIH/3T3 (Mouse fibroblast) cell lysate
Lane 4: RAW264.7 (Mouse monocytic macrophage leukemia cell) cell lysate
Lane 5: C6 (Rat glioma cell) cell lysate
Lane 6: COS-1 (African green monkey kidney fibroblast) cell lysate
Lane 7: Pig brain tissue lysate

Lysates/proteins at 5 µg/Lane.
Exposure time: 30 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA601147, 1/10,000 in primary antibody dilution buffer (K1803), overnight at 4 ℃
Secondary antibody: Goat anti-Mouse IgG-HRP (HA1006), 1/50,000 in 5% NFDM/TBST, 1 hour at room temperature

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

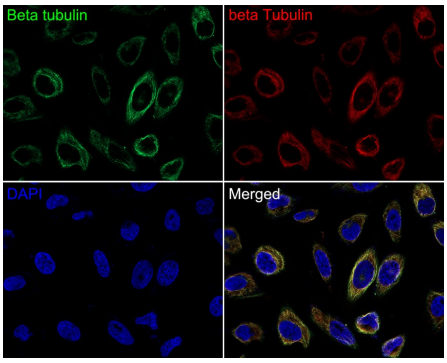

Fig2: Immunocytochemistry analysis of HeLa cells labeling beta Tubulin with Mouse anti-beta Tubulin antibody (HA601147) at 1/100 dilution.

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 (HA601147) 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.

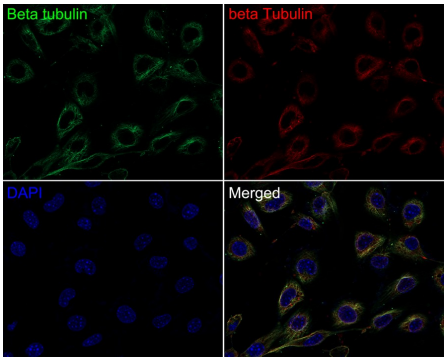

Fig3: Immunocytochemistry analysis of NIH/3T3 cells labeling beta Tubulin with Mouse anti-beta Tubulin antibody (HA601147) at 1/100 dilution.

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 (HA601147) 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.

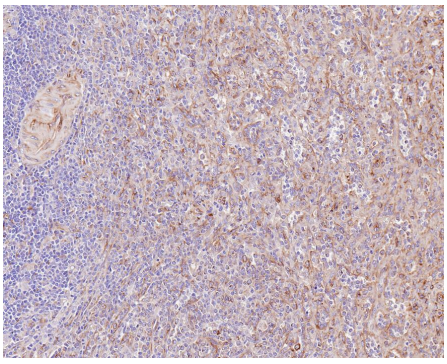

Fig4: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Mouse anti-beta Tubulin antibody (HA601147) at 1/200 dilution.

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 (HA601147) 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.

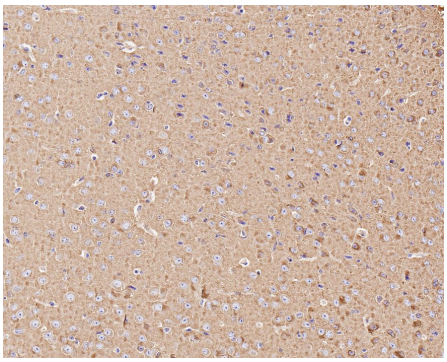

Fig5: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Mouse anti-beta Tubulin antibody (HA601147) at 1/1,000 dilution.

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 (HA601147) 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.

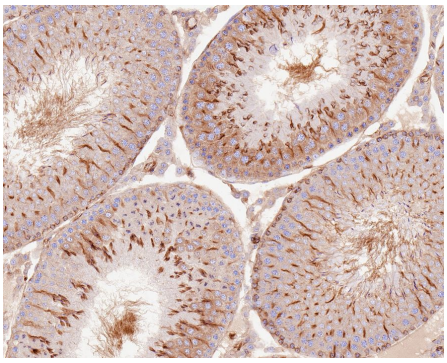

Fig6: Immunohistochemical analysis of paraffin-embedded rat testis tissue with Mouse anti-beta Tubulin antibody (HA601147) at 1/1,000 dilution.

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 (HA601147) 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. Tantry MSA et al. Insights on the Role of alpha- and beta-Tubulin Isotypes in Early Brain Development. Mol Neurobiol. 2023 Jul
2. Nicot S et al. A family of carboxypeptidases catalyzing alpha- and beta-tubulin tail processing and deglutamylation. Sci Adv. 2023 Sep