

β -tubulin

rev. 09/30/15

Cat#:EM0103

Product Type: Mouse monoclonal IgG, primary antibodies

Isotype: IgG1 **Clone ID:** 1-B11

Species reactivity: H, M, R, Zebra fish

Applications: ICC, WB, IHC, Flow Cyt

Molecular Wt.: 50 kDa

Description: Tubulin is one of several members of a small family of globular proteins. The most common members of the tubulin family are α -tubulin and β -tubulin. The beta-tubulin (relative molecular weight about 50 kDa) is counterpart of alpha-tubulin in tubulin heterodimer, it is coded by multiple tubulin genes and it is also posttranslationally modified. Heterogeneity of subunit is concentrated in C-terminal structural domain. Beta-Tubulin may have bound GTP or GDP. Under certain conditions β -tubulin can hydrolyze its bound GTP to GDP plus Pi, release the Pi, and exchange the GDP for GTP.

Specificity/Source

This antibody is produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to β -tubulin.

Positive control:

NCCIT, NIH/3T3, PC12, Mouse heart, F9, Zebra fish brain, Hela HepG2, Mouse brain

Subcellular location:

Cytoplasm > cytoskeleton

Recommended Dilutions:

WB: 1:5,000-1:10,000

ICC: 1:200 **IHC:** 1:20

FC: 1:50-1:100

Storage Buffer:

1*TBS (pH7.4), 0.5%BSA, 40%Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction:

Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Purity:

ProA affinity purified

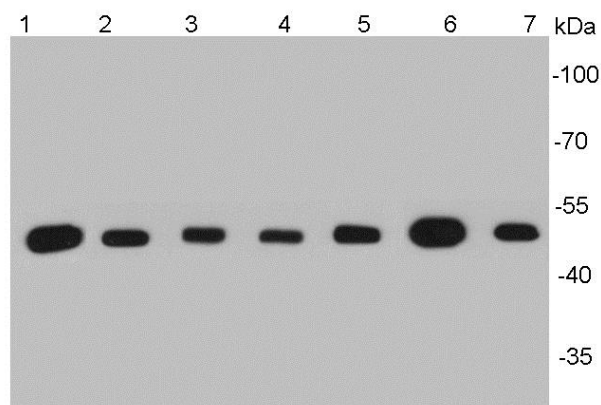


Fig1: Western blot analysis of β -tubulin on different cell lysates using anti- β -tubulin antibody at 1/5000 dilution.

Positive control:

Lane 1: NCCIT Lane 2: NIH/3T3

Lane 3: PC12 Lane 4: Mouse heart

Lane 5: F9 Lane 6: Zebra fish brain

Lane 7: Hela

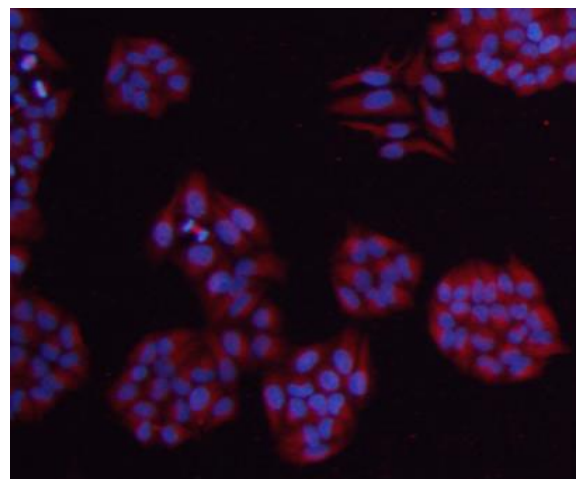


Fig2: ICC staining β -tubulin in Hela cells (red). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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Applications: WB=Western IP=Immunoprecipitation IHC=Immunohistochemistry IF=Immunofluorescence FC=Flow cytometry
Species Cross-Reactivity: H=human M=mouse R=rat Hm=hamster Mk=monkey Mi=mink C=chicken Dm=D.melanogaster X=Xenopus Z=zebrafish
B=bovine Dg=dog Pg=pig Sc=S.

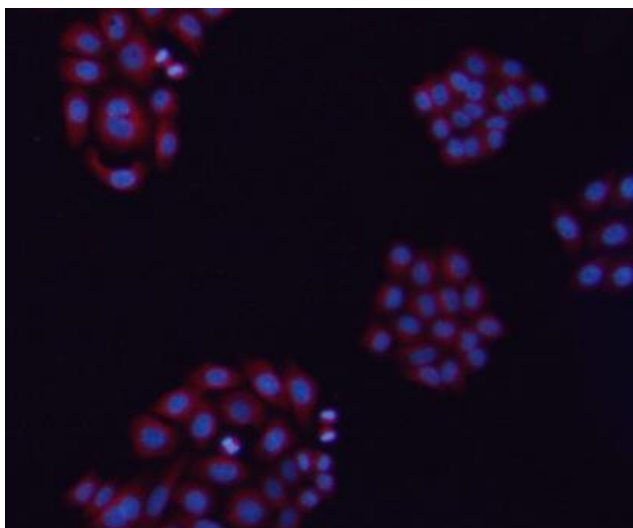


Fig3: ICC staining β -tubulin in HepG2 cells (red). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

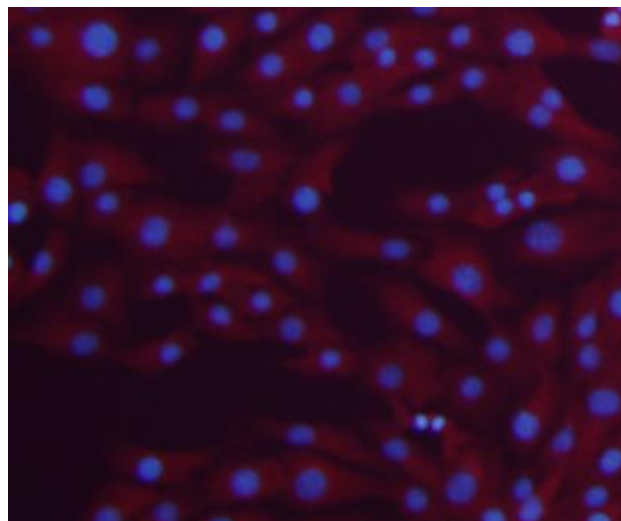


Fig4: ICC staining β -tubulin in NIH/3T3 cells (red). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

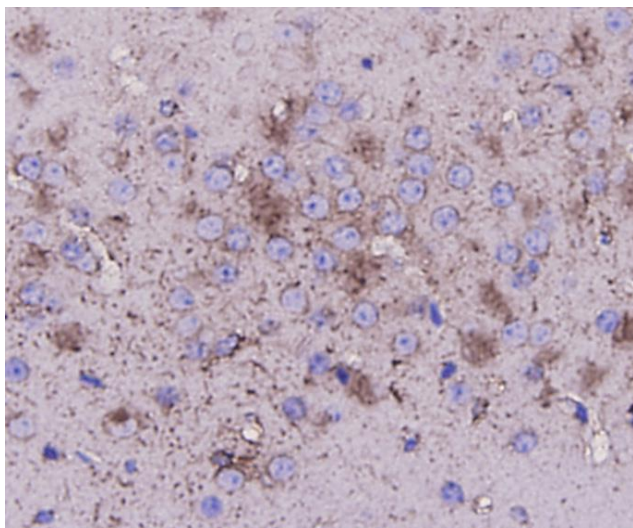


Fig5: Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti- β -tubulin antibody. Counter stained with hematoxylin.

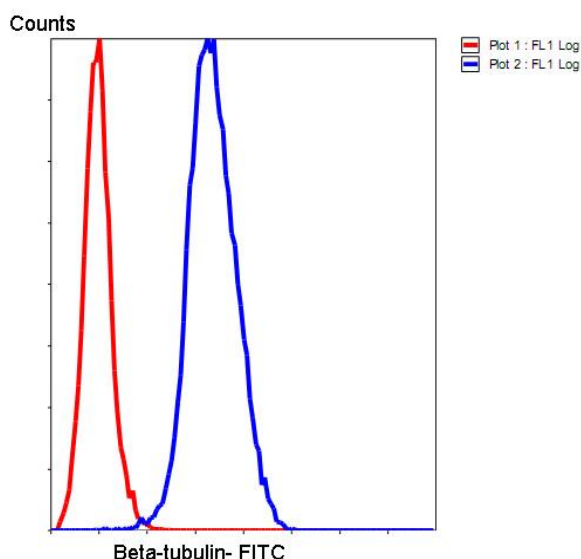


Fig6: Flow cytometric analysis of HeLa cells with β -tubulin antibody at 1/50 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Goat anti mouse IgG (FITC) was used as the secondary antibody.

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)

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