

# Anti-Beta III Tubulin Antibody

## R1401-3



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Cell, IHC-P, FC
<b>Molecular Wt:</b>	50 kDa

**Description:** Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain. TUBB3 plays a critical role in proper axon guidance and maintenance. It has been reported that  $\beta$ 3-tubulin is expressed in a wide variety of tumors. Overexpression of this isotype in clinical samples correlates with tumor aggressiveness, resistance to chemotherapeutic drugs, and poor patient survival. The  $\beta$ 3 isotype increases tumor aggressiveness by two distinct mechanisms. Incorporation of this isotype makes microtubule networks hypostable, allowing them to resist the cytotoxic effects of microtubule stabilizing drugs like taxanes or epothilones. Mechanistically, it was found that overexpression of  $\beta$ 3-tubulin increases the rate of microtubule detachment from microtubule organizing centers, an activity that is suppressed by drugs such as paclitaxel.

**Immunogen:** Synthetic peptide corresponding to Human Beta III Tubulin aa 401-450 / 450.

**Positive control:** HeLa, human brain, mouse brain, rat brain

**Subcellular location:** Cytoplasm, cytoskeleton.

**Database links:** SwissProt: Q13509 Human

**Recommended Dilutions:**

<b>WB</b>	1:2000-1:5000
<b>IF-Cell</b>	1:100-1:200

**Storage Buffer:** 1\*PBS (pH7.4), 0.2% 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:** Immunogen affinity purified.

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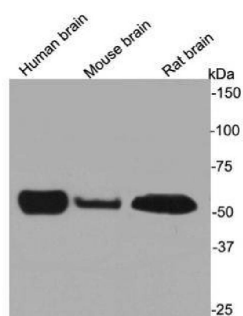
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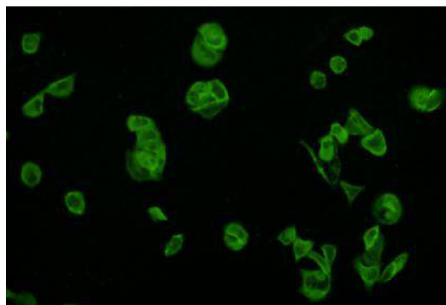
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## Images



**Fig1:** Western blot analysis on different lysates using anti-beta III tubulin rabbit polyclonal antibodies.



**Fig2:** ICC staining beta III tubulin in HeLa cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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

## Background References

1. "Class III beta-tubulin isotype: a key cytoskeletal protein at the crossroads of developmental neurobiology and tumor neuropathology." Katsetos C.D., Legido A., Perentes E., Mork S.J. *J. Child Neurol.* 18:851-866(2003)
2. "Tumoral and tissue-specific expression of the major human beta-tubulin isotypes." Leandro-Garcia L.J., Leskela S., Landa I., Montero-Conde C., Lopez-Jimenez E., Leton R., Cascon A., Robledo M., Rodriguez-Antona C. *Cytoskeleton* 67:214-223(2010)
3. "Mutations in the neuronal ss-tubulin subunit TUBB3 result in malformation of cortical development and neuronal migration defects." Poirier K., Saillour Y., Bahi-Buisson N., Jaglin X.H., Fallet-Bianco C., Nabbout R., Castelnau-Ptakhine L., *Hum. Mol. Genet.* 19:4462-4473(2010)

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