

## Beta III Tubulin Antibody

Catalog No: #48193



Package Size: #48193-1 50ul #48193-2 100ul

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

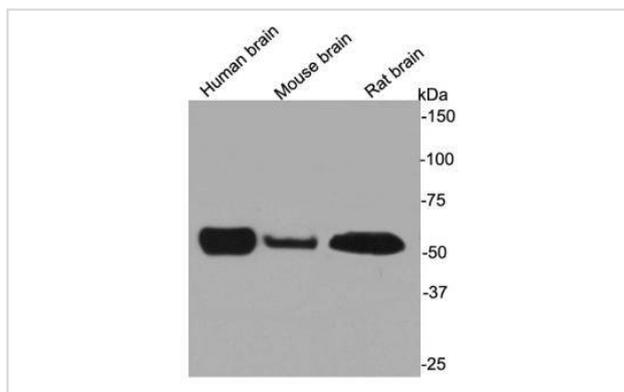
## Description

Product Name	Beta III Tubulin Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Peptide affinity purified
Applications	WB, ICC, IHC, FC
Species Reactivity	Human;Mouse;Rat
Immunogen Description	peptide
Conjugates	Unconjugated
Other Names	beta 3 tubulin antibody beta-4 antibody CDCBM antibody CDCBM1 antibody CFEOM3 antibody CFEOM3A antibody FEOM3 antibody M(beta)3 antibody M(beta)6 antibody MC1R antibody Neuron specific beta III Tubulin antibody Neuron-specific class III beta-tubulin antibody QccE-11995 antibody QccE-15186 antibody TBB3_HUMAN antibody Tubb 3 antibody TUBB3 antibody TUBB4 antibody Tubulin beta 3 antibody Tubulin beta 3 chain antibody Tubulin beta 4 antibody Tubulin beta III antibody Tubulin beta-3 chain antibody Tubulin beta-4 chain antibody Tubulin beta-III antibody
Accession No.	Swiss-Prot#:Q13509
Calculated MW	50kDa
Formulation	1*TBS (pH7.4), 1%BSA, 40%Glycerol. Preservative: 0.05% Sodium Azide.
Storage	Store at -20°C

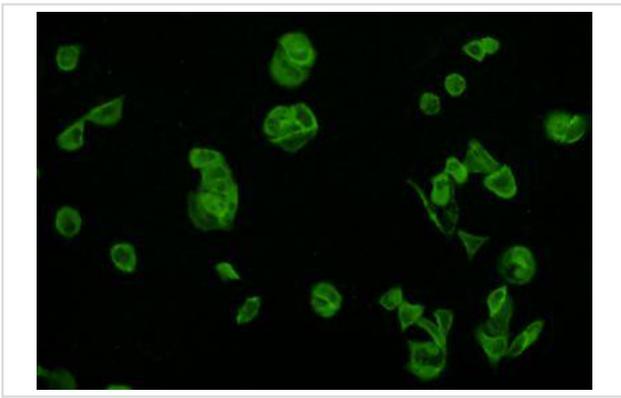
## Application Details

WB: 1:2000-1:5000 ICC: 1:100-1:200

## Images



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



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

## Background

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.

## 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  $\beta$ 3-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., Nabbut R., Castelnau-Ptakhine L., *Hum. Mol. Genet.* 19:4462-4473(2010)

Note: This product is for in vitro research use only and is not intended for use in humans or animals.