

Anti-Tubulin β -3, Polymerized (TUBB3) Antibody (Previously Covance catalog# SMI-62R)

Catalog# / Size	921001 / 500 μ L
Clone	SMI 62
Regulatory Status	RUO
Other Names	CDCBM, CDCBM1, CFEOM3, CFEOM3A, FEOM3, TUBB4, Tubulin beta-3 chain, tubulin beta-III, tubulin beta-4 chain, class III beta-tubulin
Previously	Covance Catalog# SMI-62R
Isotype	Mouse IgG1
Description	Microtubules are required for many well characterized functions in eukaryotic cells, including the movement of chromosomes in mitosis and meiosis, intracellular transport, establishment and maintenance of cellular morphology, cell growth, cell migration, and morphogenesis in multicellular organisms. The building block of a microtubule is the tubulin subunit, a heterodimer of α - and β -tubulin. Both of these monomers are found in all eukaryotes, and their sequences are highly conserved. TUBB3 is primarily expressed in neurons and may be involved in neurogenesis and axon guidance and maintenance.

Product Details

Reactivity	Mammalian, Green Algae, Molds
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Ascites Fluid (contains 0.01M sodium azide).
Preparation	Ascites
Concentration	The concentration is not quantified as this product is sold as undiluted crude mouse ascites fluid. The concentration might vary from lot-to-lot and an estimated concentration would be 1-3 mg/ml.
Storage & Handling	Store at -20°C . Upon initial thawing, apportion into working aliquots and store at -20°C . Avoid repeated freeze-thaw cycles to prevent denaturing the antibody. For long-term storage, keep the antibody at -80°C .
Application	ICC - Quality tested ELISA, WB
Recommended Usage	The optimal working dilution should be determined for each specific assay condition. The extent of permissible dilution of SMI 62 beyond those recommended for general application depends upon nature and concentration of the antigen examined, species of the antigen, method of fixation and kind of section examined. <ul style="list-style-type: none"> • WB: 1:1,000 • ICC: 1:1,000 • ELISA: 1:1,000
Application Notes	This antibody is effective in immunoblotting (WB), immunocytochemistry (ICC), and ELISA. <p>SMI 62 reacts with polymerized β-tubulin. The antibody has a preference for recognizing polymerized tubulin in immunocytochemistry. This antibody helps reduce background in cell staining applications caused by unpolymerized tubulin in the cytoplasm. Reaction is observed with cold-stabilized tubulin, premitotic, interphase and mitotic nuclei and flagellar tubulin. SMI 62 reacts with most mammalian species in neuronal and non-neuronal tissue. Green algae and molds also react with SMI 62.</p> <p>Observed MW is at 50 kDa.</p> <p>This clone shows high reactivity towards other β-tubulin isotypes.</p>

Application References

1. Zhu B, *et al.* 2010. *Am J Physiol Lung Cell Mol Physiol.* 299: L493. (WB) [PubMed](#)
2. Fortune B, *et al.* 2008. *Invest. Ophthalmol. Vis. Sci.* 49: 255.

Product Citations

1. Zhu B, *et al.* 2010. *Am J Physiol Lung Cell Mol Physiol.* 299:L493-501. [PubMed](#)

RRID

AB_2565385 (BioLegend Cat. No. 921001)

Antigen Details

Cell Type	Mature Neurons
Biology Area	Cell Biology, Cell Motility/Cytoskeleton/Structure, Neuroscience, Neuroscience Cell Markers
Molecular Family	Microtubules
Gene ID	203068

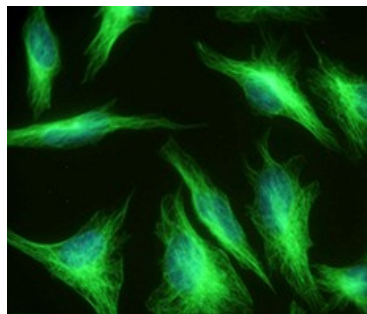
Related Protocols

[Immunohistochemistry Protocol for Sternberger Monoclonal Antibodies](#)

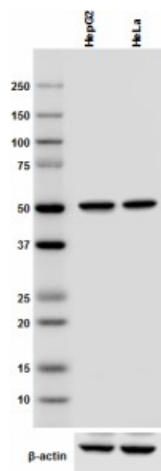
Other Formats

Anti-Tubulin β -3, Polymerized (TUBB3)

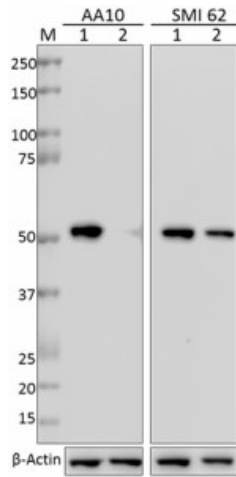
Product Data



Staining of Polymerized Beta Tubulin (SMI 62) on HeLa cells using MeOH fixation.



Total lysates (15 μ g protein) from HepG2 and HeLa cells were resolved by electrophoresis (4-20% Tris-glycine gel), transferred to nitrocellulose, and probed with 1:1000 anti-Tubulin β -3, Polymerized (TUBB3) antibody, clone SMI 62. Proteins were visualized using chemiluminescence detection by incubation with HRP Goat anti-Mouse secondary antibody (Cat. No. 405306, 1:3000 dilution). Direct-Blot™ HRP anti- β -actin antibody was used as a loading control (Cat. No. 643807, 1:8000 dilution).



Whole cell lysates (15 µg protein) from A549 (lane 1) and HeLa (lane 2) cells were resolved by electrophoresis (4-12% Bis-Tris gel), transferred to nitrocellulose, and probed with 0.1 µg/mL (1:5000 dilution) of purified anti-Tubulin Beta 3 (TUBB3) antibody, clone AA10, or anti-Tubulin β-3, Polymerized (TUBB3) antibody (clone SMI 62) (1:1000 dilution). Proteins were visualized using chemiluminescence detection by incubating with 1:3000 dilution of HRP goat anti-mouse-IgG secondary antibody (Cat. No. 405306). Direct-Blot™ HRP anti-β-Actin antibody (1:5000 dilution, Cat. No. 643807) was used as a loading control (lower). Lane M: MW ladder. Cell lysates were loaded in order of decreasing *TUBB3* mRNA expression levels; A549 cells express ~14-fold more *TUBB3* mRNA than HeLa cells (source: Human Protein Atlas). Lane M: Molecular Weight marker.

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