OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for AM03079PU-N

beta V Tubulin (TUBB) Mouse Monoclonal Antibody [Clone ID: TU-12]

Product data:

Product Type:	Primary Antibodies
Clone Name:	TU-12
Applications:	FC, IF, WB
Recommended Dilution:	**Western Blot:** Recommended dilution: 1-2 µg/ml, reducing conditions. **Immunocytochemistry:** Recommended dilution: 2-5 µg/ml, fixed and permeabilized cells.
Reactivity:	All Species
Host:	Mouse
Isotype:	IgM
Clonality:	Monoclonal
Immunogen:	Porcine brain microtubule protein MTP-1.
Specificity:	The antibody TU-12 recognizes an epitope located within aa 345-430 of C-terminal domain of beta-tubulin in various species.
Formulation:	PBS, pH 7.4 with 15 mM Sodium Azide as preservative. State: Purified State: Liquid purified IgG fraction (> 95% pure by SDS-PAGE).
Concentration:	lot specific
Purification:	Precipitation Methods.
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	tubulin beta class I
Database Link:	P07437

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Background: The microtubules are intracellular dynamic polymers made up of evolutionarily conserved polymorphic alpha/beta-tubulin heterodimers and a large number of microtubule-associated proteins (MAPs). The microtubules consist of 13 protofilaments and have an outer diameter 25 nm. Microtubules have their intrinsic polarity; highly dynamic plus ends and less dynamic minus ends. Microtubules are required for vital processes in eukaryotic cells including mitosis, meiosis, maintenance of cell shape and intracellular transport. Microtubules are also necessary for movement of cells by means of flagella and cilia. In mammalian tissue culture cells microtubules have their minus ends anchored in microtubule organizing centers (MTOCs). The GTP (guanosintriphosphate) molecule is an essential for tubulin heterodimer to associate with other heterodimers to form microtubule. In vivo, microtubule dynamics vary considerably. Microtubule polymerization is reversible and a populations of microtubules in cells are on their minus ends either growing or shortening - this phenomenon is called dynamic instability of microtubules. On a practical level, microtubules can easily be stabilized by the addition of non-hydrolysable analogues of GTP (eg. GMPPCP) or more commonly by anti-cancer drugs such as Taxol. Taxol stabilizes microtubules at room temperature for many hours. Using limited proteolysis by enzymes both tubulin subunits can be divided into N-terminal and C-terminal structural domains.
The beta-tubulin (relative molecular weight around 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.

Synonyms: Tubulin beta chain, Tubulin beta-5 chain