Synaptic Systems

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α-Tubulin

Cat.No. 302 211C3; Monoclonal mouse antibody, 50 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg purified IgG, lyophilized, fluorescence-labeled with Oyster® 550. Rabbit serum albumin was added for stabilization. For reconstitution add 50 µl H_2O to get a 1mg/ml solution in PBS. Either add 1:1 (v/v) glycerol, then aliquot and store at -20°C until use, or store aliquots at -80°C without additives. Reconstitute immediately upon receipt! Avoid bright light when working with the antibody to minimize photo bleeching of the fluorescent dye.The mounting agent Aquatex®(Merck Chemicals) is not compatible with Oyster dyes!
Applications	**WB**: N/A **IP**: N/A **ICC**: 1 : 500 up to 1 : 1000 **IHC**: not tested yet **IHC-P/FFPE**: not tested yet
Label	Oyster 550
Clone	3A2
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 419 to 435 from human α-tubulin 4A (UniProt Id: P68366)
Epitop	Epitop: AA 419 to 435 from human α-tubulin 4A (UniProt Id: P68366)
Reactivity	Reacts with: human (P68366), rat, mouse, vertebrates, invertebrates, yeast. Other species not tested yet.
Specificity	Specific for α-tubulin (glu- and tyr-α-tubulin).
matching control	302-21P

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Microtubules are involved in a wide variety of cellular activities ranging from mitosis and transport events to cell movement and the maintainance of cell shape.
Tubulin itself is a globular protein which consists of two polypeptides, **α-tubulin** and β-tubulin. α- and β-tubulin dimers are assembled to 13 protofilaments that form a microtubule of 22 nm diameter.
Tyrosine ligase ads a C-terminal tyrosin to monomeric α-tubulin.
Assembled microtubules can again be detyrosinated by a cytoskeleton associated carboxypeptidase. Detyrosinated α-tubulin is referred to as **Glu-α-tubulin**. Another post-translational modification of detyrosinated α-tubulin is C-terminal polyglutamylation which is characteristic for microtubules in neuronal cells and the mitotic spindle. A third variant of detyrosinated α-tubulin is **Δ2-tubulin** which lacks the C-terminal glutamic acid. It cannot be tyrosinated by tyrosine ligase and is one of the dominant α-tubulin isoforms in neurons.

Selected General References

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