

## Glu- $\alpha$ -tubulin

Cat.No. 302 011; Monoclonal mouse antibody, 100  $\mu$ g purified IgG (lyophilized)

### Data Sheet

Reconstitution/Storage	100 $\mu$ g purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 100 $\mu$ l H <sub>2</sub> O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 100 up to 1 : 1000 (AP staining) (see remarks) <b>IP:</b> not tested yet <b>ICC:</b> 1 : 200 <b>IHC:</b> 1 : 200 <b>IHC-P/FFPE:</b> yes <b>ELISA:</b> yes
Clone	1D5
Subtype	IgG1 ( $\kappa$ light chain)
Immunogen	Synthetic peptide corresponding to AA 437 to 450 from human Glu- $\alpha$ -tubulin
Epitop	Epitop: AA 448 to 450 from human Glu- $\alpha$ -tubulin
Reactivity	Reacts with: human, rat, mouse, zebrafish, eukaryotes. Other species not tested yet. Detects also cilia of Paramecium.
Specificity	Specific for detyrosinated $\alpha$ -tubulin (glu-tubulin) and polyglutamylated tubulin (also $\beta$ -tubulin). No cross reaction to tyrosinated tubulin.
Remarks	<b>WB:</b> Tween 20 (other detergents not yet tested) should not be added to the blocking and washing solution. It greatly diminishes the intensity of the signal.

### 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 maintenance of cell shape. Tubulin itself is a globular protein which consists of two polypeptides,  $\alpha$ -tubulin and  $\beta$ -tubulin.  $\alpha$ - and  $\beta$ -tubulin dimers are assembled to 13 protofilaments that form a microtubule of 22 nm diameter. Tyrosine ligase adds a C-terminal tyrosin to monomeric  $\alpha$ -tubulin. Assembled microtubules can again be detyrosinated by a cytoskeleton associated carboxypeptidase. Detyrosinated  $\alpha$ -tubulin is referred to as **Glu- $\alpha$ -tubulin**. Another post-translational modification of detyrosinated  $\alpha$ -tubulin is C-terminal polyglutamylation which is characteristic for microtubules in neuronal cells and the mitotic spindle. A third variant of detyrosinated  $\alpha$ -tubulin is  **$\Delta$ 2-tubulin** which lacks the C-terminal glutamic acid. It cannot be tyrosinated by tyrosine ligase and is one of the dominant  $\alpha$ -tubulin isoforms in neurons.

### Selected References SYSY Antibodies

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