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Anti-β-Tubulin (Ser-172), Phosphospecific Antibody

Catalog # AN2004

Specification

Anti-β-Tubulin (Ser-172), Phosphospecific Antibody - Product Information

Application	**WB**
Primary Accession	Q13509
Reactivity	**Bovine, Chicken**
Host	**Rabbit**
Clonality	**Rabbit Polyclonal**
Isotype	**IgG**
Calculated MW	**50433**

Anti-β-Tubulin (Ser-172), Phosphospecific Antibody - Additional Information

Gene ID	**10381**

Other Names
TUBB3

Dilution
WB~~1:1000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Anti-β-Tubulin (Ser-172), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Anti-β-Tubulin (Ser-172), Phosphospecific Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-β-Tubulin (Ser-172), Phosphospecific Antibody - Images

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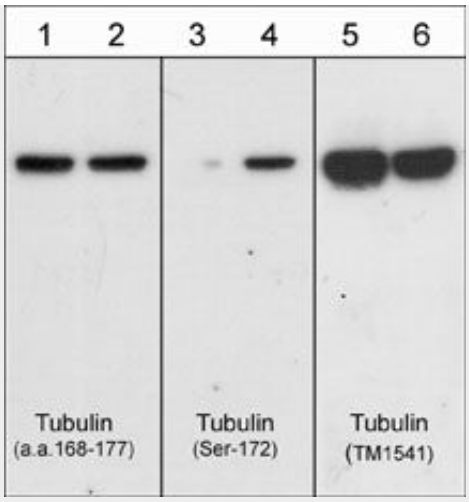
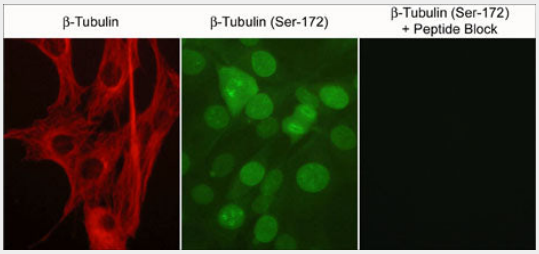


Western blot analysis of purified brain tubulin untreated (lanes 1,3,5) or treated with ERK2 kinase to phosphorylate Ser-172 (lanes 2,4,6). The blot was probed with anti-β-Tubulin (a.a. 168-177) (lanes 1 & 2), anti-β-Tubulin (Ser-172) (lanes 3 & 4), and anti-β-Tubulin (TM1541) (lanes 5 & 6).



Immunocytochemical labeling in C2C12 cells using anti-β-Tubulin (TM1541) monoclonal antibody and anti-β-Tubulin (Ser-172) polyclonal antibody. The specificity of the binding for the latter antibody was demonstrated by using the antibody in the presence of phospho-β-Tubulin (Ser-172) peptide (TX1725).

Anti-β-Tubulin (Ser-172), Phosphospecific Antibody - Background

Microtubules (MTs) are cytoskeletal elements that play an essential role in cell division and cytoplasmic organization. MTs are dynamic polymers of α/β-tubulin heterodimers. At least two populations of MTs, called dynamic and stable according to their rates of turnover, are readily distinguishable in cells. The proteins associated with MTs (MAPs) are among the best-known factors that regulate MT dynamics and stability. In addition, a variety of different post-translational modifications may also regulate MT dynamics and stability. Phosphorylation is one of these modifications and it can occur on serine, threonine, and tyrosine residues in β-Tubulin isoforms. Multiple kinases can phosphorylate Ser-444 at the C-terminus of βIII-Tubulin in vitro. Unphosphorylated Ser-444 in βIII-Tubulin is an early marker for cells of neuronal lineage, while phosphorylation of Ser-444 is upregulated after neuronal maturation and may preferentially occur in assembled MTs. By contrast, Cdk1 phosphorylation of Ser-172 in β-Tubulin occurs in mitotic cells and may impair tubulin incorporation into microtubules.