phospho-α6-Tubulin (Ser-165)

Blocking Peptide

Cat. # TX4135
Size 50 µg

Background

Microtubules (MTs) are cytoskeletal elements that play an essential role in cell division and cytoplasmic organization. MTs are dynamic polymers of a/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 α- and β-Tubulin isoforms. Multiple kinases can phosphorylate Ser-444 at the C-terminus of βIII-Tubulin in vitro, and unphosphorylated Ser-444 may be an early marker for cells of neuronal lineage. Cdk1 can phosphorylate Ser-172 in β-Tubulin during mitosis and this may impair tubulin incorporation into microtubules. In α-tubulin, PKC can phosphorylate Ser-165 leading to increased cell motility in human breast cells.

Background References

Diaz-Nido, J. et al. (1990) J Biol. Chem. 265(23):13949.
Westermann, S. & Weber, K. (2003) Nat. Rev. Mol. Cell. Biol. 4:938.
Fourest-Lieuvin, A. et al. (2006) Mol. Biol. Cell. 17(3):1041.

Applications

Blocking	1:1000
ELISA	50 ng/well

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Specificity

The peptide is specifically recognized by anti-α6-Tubulin (Ser-165) phospho-specific antibody (TP4131) in ELISA, and has been shown to block the reactivity of TP4131 during Western blot. In addition, the peptide is recommended for use in blocking TP4131 reactivity in immunocytochemistry.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Peptide Sequence

Phospho-α6-Tubulin (Ser-165) synthetic peptide corresponds to amino acid residues around serine 165 of human α6-Tubulin. This sequence is well conserved in most α-tubulin isoforms from most eukaryotic species, but is not conserved in β-Tubulin.

Buffer and Storage

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at –20°C. Stable for 1 year.

Related Products

AK6060	Actin & Tubulin Antibody Sampler Kit
MK7640	Microtubule Labeling Immunocytochemistry Kit
TM4111	α-Tubulin (C-terminus) Mouse Monoclonal
TP4281	α6-Tubulin (a.a. 160-169) Rabbit Polyclonal
TP4131	α6-Tubulin (Ser-165), phospho-specific Rabbit Polyclonal

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