

STORAGE AND HANDLING



CYCLED TUBULIN™

Catalog Number	Volume	Quantity
032005 - 1 mg	50 ul	1 mg
032005 - 20 mg	1000 ul	20 mg

STORE AT -80 °C

Made in the USA

For research use only.

Shipping: shipped on dry ice

Storage Conditions: store at -80 °C immediately

Form: clear aqueous solution

Source: bovine

Molecular Weight: ~110 kDa

Purity: >99% (SDS-PAGE)

Concentration: 20 mg/ml

Buffer Conditions: 80 mM PIPES, 1 mM EGTA, and 1 mM MgCl₂ (pH 6.8)

Shelf Life: check product label for expiration date

NOTE! Tubulin protein is a labile molecule that loses activity within hours of being thawed. When handling Cycled Tubulin™, it is strongly recommended to follow the instructions detailed herein. Even perceived slight differences in handling can have a significant impact on product quality.

Technical Notes

- store at -80°C
- avoid repeated freeze-thaw cycles, refreeze in liquid Nitrogen if required
- thaw only when ready to use at 37°C followed by immediate placement on ice
- perform clarifying spin to remove protein aggregates
- visit www.PureSoluble.com/protocols for common microtubule polymerization protocols

Storage and Handling

Immediately transfer Cycled Tubulin™ to -80°C upon receipt. Thaw only when ready to use by placing briefly in a 37°C water bath. Once the tubulin protein is approximately halfway thawed, remove from the water bath and thaw to completion with gentle flicking. Immediately place thawed tubulin protein on ice and continue to work on ice.

It is highly recommended to clarify the tubulin after thawing to remove any protein aggregates. Centrifuge the tubulin protein at 90k rpm (350k x g) for 5 minutes at 4°C in an ultracentrifuge rotor (i.e. TLA 100) and recover the supernatant on ice. The tubulin protein is now ready for experimental use.

While repeated freeze/thaw cycles should be avoided, Cycled Tubulin™ can be aliquoted into smaller experimental batches with only minor loss of activity. Follow the instructions above to thaw and clarify the tubulin protein. Working on ice, aliquot the tubulin protein into experimental batches not less than 5 ul in volume. Flash freeze the experimental aliquots in liquid Nitrogen and store at -80°C. Note that it is not recommended to dilute the tubulin protein prior to refreezing. Discard any unused portion of the experimental aliquots.

Applications

Cycled Tubulin™ will polymerize into microtubules when supplemented with GTP, warmed to 37 °C, and kept above its critical concentration. Cycled Tubulin™ is suitable for use in a variety of cell-free experimental applications, and can be combined with fluorescent or biotinylated tubulin proteins in generating microtubules *in vitro*. Visit www.PureSoluble.com/protocols for common microtubule polymerization protocols.



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