

STORAGE AND HANDLING



LYOPHILIZED TUBULIN

Catalog Number	Mass	Quantity
142001 - 1 mg	3 mg total powder	1 mg tubulin protein

STORE IN A COOL,
DRY ENVIRONMENT

For research use only.

Shipping: shipped at ambient temperatures

Storage Conditions: store in a cool, dry environment

Form: desiccated powder (1 mg tubulin protein is supplied as 3 mg powder with extra mass attributed to trehalose, a lyoprotectant)

Source: bovine

Molecular Weight: ~110 kDa

Purity: >99% (SDS-PAGE)

Buffer Conditions Upon Reconstitution: 10 mM Sodium Phosphate, 0.5 mM MgCl₂, 0.1 mM GTP, and 0.25 M Trehalose (pH 7.0)

Shelf Life: check product label for expiration date

NOTE! Tubulin protein is a labile molecule that loses activity within hours of being reconstituted. When handling Lyophilized 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 desiccated at 4°C, avoid hot and humid storage conditions
- reconstitute only when ready to use, keep on ice
- perform clarifying spin to remove protein aggregates
- freeze in liquid Nitrogen after reconstitution if desired, avoid repeated freeze-thaw cycles
- visit www.PureSoluble.com/protocols for common microtubule polymerization protocols

Storage and Handling

Store Lyophilized Tubulin desiccated at 4°C. Reconstitute only when ready to use by resuspending in ice-cold ultrapure water to 40 mg/ml [tubulin protein]. Note that 1 mg tubulin protein is supplied as 3 mg powder (extra mass attributed to trehalose, a lyoprotectant), and reconstitution should be based on the tubulin protein concentration. Incubate on ice for 15 minutes and mix occasionally with gentle vortexing. Next, clarify the tubulin to remove any protein aggregates. Centrifuge the tubulin protein at 14k rpm (21k x g) for 1 minute at 4°C in a microcentrifuge and recover the supernatant on ice. The tubulin protein is now ready for experimental use.

If desired, the reconstituted tubulin protein can be aliquoted into smaller experimental batches and flash frozen for later use. 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 freezing. 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. Discard any unused portion of the experimental aliquots to avoid repeated freeze/thaw cycles

Applications

Lyophilized Tubulin will polymerize into microtubules when supplemented with GTP, warmed to 37°C, and kept above its critical concentration. Lyophilized 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.



PurSolutions, LLC
111 10th Ave S, Suite 110
Nashville, TN 37203

<https://www.PureSoluble.com>
info@PureSoluble.com
+1-540-560-3411