

STORAGE AND HANDLING



LABELED TUBULIN-ALEXA FLUOR® 594

Catalog Number	Volume	Quantity
059405 - 0.1 mg	5 ul	0.1 mg
059405 - 0.5 mg	25 ul	0.5 mg
059405 - 1.0 mg	50 ul	1.0 mg

STORE AT -80 °C AND
PROTECT FROM LIGHT

Made in the USA

For research use only.

Shipping: shipped on dry ice

Storage Conditions: store at -80 °C immediately

Form: red aqueous solution

Source: bovine

Molecular Weight: ~110 kDa

Purity: >99% (SDS-PAGE)

Concentration: 20 mg/ml

Buffer Conditions: 50 mM K-Glutamate and 0.5 mM MgCl₂ (pH 7.0)

Maximum Excitation/Emission: λ=590/617 nm

Labeling Stoichiometry: check product label

Shelf Life: check product label for expiration date

NOTE! Tubulin is a labile molecule that loses activity within hours of being thawed. When handling Labeled Tubulin-Alexa Fluor® 594, 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 and protect from light
- 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 Labeled Tubulin-Alexa Fluor® 594 to -80°C upon receipt. Thaw only when ready to use by placing briefly in a 37°C water bath. Once the labeled tubulin is approximately halfway thawed, remove from the water bath and thaw to completion with gentle flicking. Immediately place thawed labeled tubulin on ice and continue to work on ice.

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

While repeated freeze/thaw cycles should be avoided, Labeled Tubulin-Alexa Fluor® 594 can be aliquoted into smaller experimental batches with only minor loss of activity. Follow the instructions above to thaw and clarify the labeled tubulin protein. Working on ice, aliquot the labeled tubulin into experimental batches not less than 2 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 labeled tubulin prior to refreezing. If larger handling volumes are desired, consider combining labeled tubulin with unlabeled tubulin prior to refreezing (depending on application).

Applications

Labeled Tubulin-Alexa Fluor® 594 will polymerize into microtubules when supplemented with GTP, warmed to 37 °C, and kept above its critical concentration. Labeled tubulin is suitable for use in a variety of fluorescent experimental applications including live cell injection, and can be combined with unlabeled tubulin (Cycled Tubulin | Cat. No. 032005) in generating fluorescent microtubules *in vitro*. Visit www.PureSoluble.com/protocols for common microtubule polymerization protocols.



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