Product Information

Tetrazolium (chloride)
Item No. 17342

CAS Registry No.: 298-96-4
Formal Name: 2,3,5-triphenyl-2H-tetrazolium, monochloride
Synonyms: Tetrazolium red, 2,3,5-Triphenyl Tetrazolium Chloride; TTC
MF: C_{19}H_{15}N_{4} • Cl
FW: 334.8
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 247 nm

Laboratory Procedures

For long term storage, we suggest that tetrazolium (chloride) (TTC) be stored as supplied at -20°C. It should be stable for at least two years.

TTC is supplied as a crystalline solid. A stock solution may be made by dissolving the TTC in the solvent of choice. TTC is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of TTC in these solvents is approximately 1 and 0.25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of TTC can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TTC in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

TTC is a redox indicator used to detect cellular respiration.\(^1\) It is primarily reduced by Complex I in mitochondria and, under anaerobic conditions, is completely reduced to an insoluble red 1,3,5-triphenylformazan.\(^2\) TTC assays are typically used as a mitochondrial redox potential indicator for cell death.\(^1\)

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/17342

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals herein. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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