

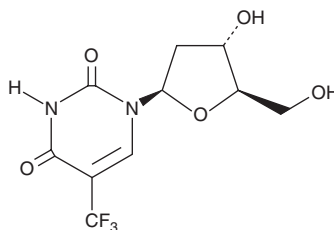
# PRODUCT INFORMATION



## Trifluorothymidine

Item No. 21366

**CAS Registry No.:** 70-00-8  
**Formal Name:**  $\alpha,\alpha,\alpha$ -trifluoro-thymidine  
**Synonyms:** NSC 75520, NSC 529182, TFT, Trifluridine  
**MF:**  $C_{10}H_{11}F_3N_2O_5$   
**FW:** 296.2  
**Purity:**  $\geq 98\%$   
**UV/Vis.:**  $\lambda_{max}$ : 262 nm  
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ\text{C}$   
**Stability:**  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Trifluorothymidine (TFT) is supplied as a crystalline solid. A stock solution may be made by dissolving the TFT in the solvent of choice. TFT is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of TFT in these solvents is approximately 10 and 16 mg/ml.

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 TFT can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TFT in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

TFT is a derivative of thymidine (Item No. 20519) that exhibits antiviral and anticancer activity by inhibiting thymidylate synthase, thereby blocking nucleic acid synthesis, and by incorporating into DNA, which leads to DNA damage and apoptosis.<sup>1</sup>

### Reference

1. Suzuki, N., Emura, T., and Fukushima, M. Mode of action of trifluorothymidine (TFT) against DNA replication and repair enzymes. *Int. J. Oncol.* **39**(1), 263-270 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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