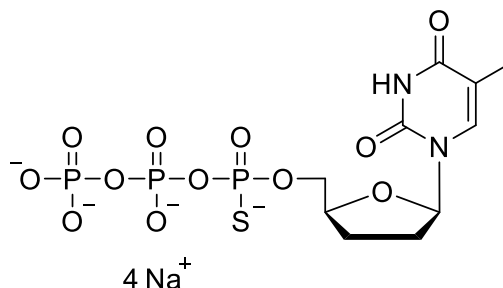


Technical Information about dTTP- α -S / ddTTP- α -S

Update: April 11, 2019 HU



Abbreviation: dTTP- α -S / ddTTP- α -S

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₀ H ₁₇ N ₂ O ₁₂ P ₃ S (free acid)	[154771-48-9]	482.2 (free acid)	λ_{\max} 267 nm / ϵ 9600 / pH 7	D 029

Name: 3'- Deoxythymidine- 5'- O- (1- thiotriphosphate) and 2', 3'- Dideoxythymidine- 5'- O- (1- thiotriphosphate), respectively.

Description: dTTP- α -S is a further modification of the DNA chain terminator 3'- deoxythymidine triphosphate (dTTP), where a non-bridging oxygen in the α - phosphate is replaced by sulfur. Since thymidine itself is already lacking the 2'- hydroxy group, 3'- deoxythymidine actually describes the 2', 3'- dideoxy compound (ddTTP- α -S). Thus, both names (and abbreviations) mean the same structure.

Specification: Aqueous solution of the sodium salt (10 mM) as a mixture of Rp-/Sp-isomers (~1:1). Other salt forms of dTTP- α -S are available upon request. Micromolar quantities are determined by UV at λ_{\max} . When opening the tube please make sure that no liquid is lost within the cap. A short spin-down in a bench centrifuge is recommended before use.

Purity: Typical purity is better than 95% (HPLC / UV / 267 nm) for the mixture of isomers at time of quality control and packing. However, actual purity depends on storage and transport conditions. The product is not sterile and has not been tested for endotoxins.

Stability and Storage: dTTP- α -S is relatively stable when stored as aqueous solution in the freezer (- 20° celsius necessary, - 80° recommended), however, at ambient temperature the compound starts to decompose forming dTTP and other nucleotide fragments. Thus, it is strongly recommended to allow thawing only immediately before using the product. If you will not use up the vial with one application, please aliquot the contents of the vial in order to avoid repeated freeze/thaw cycles for the rest. When making such aliquots be sure to operate quickly and to freeze the vials again as soon as possible. Please ask for an offer to already pack these aliquots as you will need them.

Toxicity and Safety: Since thymidine triphosphate has multiple tasks in every organism, it is very likely that TTP analogues will interfere with many cell regulation processes *in vivo*. However, due to the rather small quantities to work with, no health hazards have been reported. Nevertheless please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.

Our products are designed, developed and sold for research purposes only! They are intended for *in vitro* and nonhuman *in vivo* laboratory applications. Any other use requires approval of health authorities.

Not for drug, household or related uses!

Selected References for ddTTP- α -S:

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