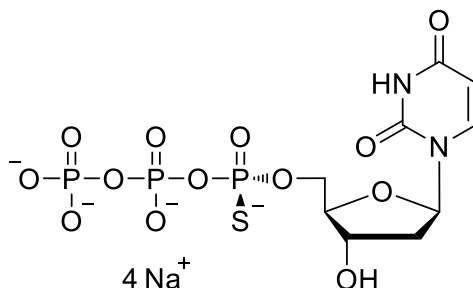


Technical Information about Sp-dUTP- α -S

Update: April 11, 2019 HJL



Abbreviation: **Sp-dUTP- α -S**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₉ H ₁₅ N ₂ O ₁₃ P ₃ S (for free acid)	[876068-87-0]	484.2 (for free acid)	λ_{\max} 262 nm / ϵ 10000 / pH 7	D 049

Name: 2'-Deoxyuridine-5'-O-(1-thiotriphosphate), Sp-isomer

Description: Sp-dUTP- α -S is a modification of 2'-deoxyuridine triphosphate (dUTP), where one of the non-bridging oxygens in the S position of the α -phosphate is replaced by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus. The corresponding Rp-isomer is offered as well (Cat. No. D 048).

Specification: Aqueous solution of the sodium salt (10 mM). Other salts of Sp-dUTP- 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 analysis is better than 95% (HPLC / UV / 262 nm) 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: Sp-dUTP- α -S is relatively stable when stored frozen in aqueous solution (-20° Celsius necessary, -80° recommended), however, at ambient temperature the compound slowly starts to decompose forming dUTP and other nucleotide fragments. In order to maintain its original high quality, it is recommended to allow thawing only 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 vial again as soon as possible.

Toxicity and Safety: Since deoxynucleoside triphosphates have important tasks in every organism, it is very likely that dUTP 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 Sp-dUTP- α -S:

Jacobson, K. A.; Costanzi, S.; Ivanov, A.A.; Tchilibon, S.; Besada, P.; Gao, Z.-G.; Maddileti, S.; Harden, T.K., *Biochem. Pharmacol.*, **71**, 540 - 549 (2006): "Structure Activity and Molecular Modeling Analyses of Ribose- and Base-modified Uridine 5'-triphosphate Analogues at the Human P2Y2 and P2Y4 Receptors"

Bergman, A.-C.; Nyman, P.O.; Larsson, G., *FEBS Lett.*, **441**, 327 - 330 (1998): "Kinetic Properties and Stereospecificity of the Monomeric dUTPase from Herpes Simplex Virus Type I"