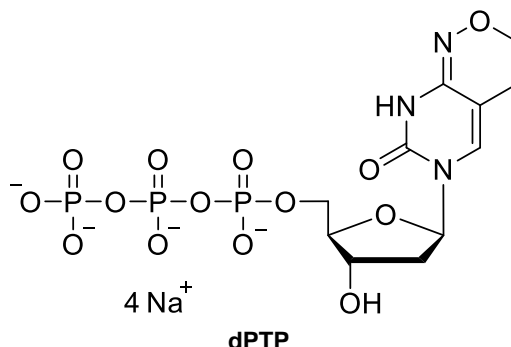


Technical Information about dPTP

Update: May 5, 2022 is



Abbreviation:

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₁ H ₁₈ N ₃ O ₁₄ P ₃ (free acid)	[173964-83-5]	509.2 (free acid)	λ _{max} 294 nm / ε 6700 / pH 7	D 114

Name: 6- (β- D- 2- Deoxyribofuranosyl)- 3, 4- dihydro- 8H- pyrimido- [4, 5- c]- [1, 2]- oxazin- 7- one- 5'- O- triphosphate / 2'-Deoxy-P-nucleoside-5'-O-triphosphate

Description: dPTP is the triphosphate of the 2'-deoxy-P-nucleoside (dP nucleoside) which is a bicyclic analogue of N⁴-methoxy-2'-deoxycytidine.

Properties: dPTP is a triphosphate analogue with artificial base for directed mutagenesis experiments. It forms stable base pairs with both adenine (A) and guanine (G).

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of dPTP may be 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 / 294 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: dPTP is most stable when stored as aqueous solution in the freezer (-20° Celsius necessary, -80° recommended), however, at ambient temperature the compound slowly starts to decompose. Thus, 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 triphosphates have multiple tasks in every organism, it is very likely that triphosphate 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 dPTP:

Ruff, A.J.; Marienhagen, J.; Verma, R.; Roccatano, D.; Genieser, H.-G.; Nieman, P.; Shivange, A.V.; Schwaneberg, U., *J. of Mol. Cat. B: Enzymatic*, **84**, 40 - 47 (2012): "dRTP and dPTP a Complementary Nucleotide Couple for the Sequence Saturation Mutagenesis (SeSaM) Method"

Wong, T.S.; Roccatano, D.; Loakes, D.; Tee, K.L.; Schenk, A.; Hauer, B.; Schwaneberg, U., *Biotechnol. J.*, **3**, 74 - 82 (2008): "Transversion-Enriched Sequence Saturation Mutagenesis (SeSaM-Tv⁺): "A Random Mutagenesis Method with Consecutive Nucleotide Exchanges that Complements the Bias of Error-Prone PCR"

Zaccolo, M.; Williams, D.M.; Brown, D.M.; Gherardi, E., *J. Mol. Biol.*, **255**, 589 - 603 (1996): "An Approach to Random Mutagenesis of DNA Using Mixtures of Triphosphate Derivatives of Nucleoside Analogues"