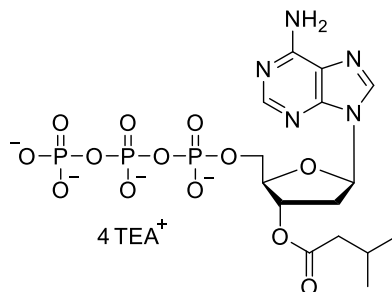


Technical Information about 3'-O-IVal-dATP

Update: June 30, 2022 ss



Abbreviation: 3'-O-IVal-dATP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₅ H ₂₄ N ₅ O ₁₃ P ₃ (for free acid)	[pending]	575.3 (for free acid)	λ _{max} 259 nm / ε 15000 / pH 7	D 168 T

Name: 2'- Deoxy- 3'- O- isovaleryladenosine- 5'- O- triphosphate, triethyl ammonium salt

Description: 3'-O-IVal-dATP is an analogue of the parent nucleotide 2'-deoxyadenosine-5'-O-triphosphate (dATP) in which the 3'-hydroxy group is esterified by isovaleric acid.

Properties: 3'-O-IVal-dATP is an analogue of dATP with blocked 3'-hydroxy function, potentially useful as a transient, pH-sensitive chain terminator during DNA polymerization. The isovaleryl group of 3'-O-IVal-dATP is sensitive towards alkaline conditions and can be split off to allow further subsequent polymerization steps.

Specification: Aqueous solution of the triethyl ammonium salt (10 mM). Other salt forms of 3'-O-IVal-dATP 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 / 259 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: 3'-O-IVal-dATP is most stable when stored as aqueous solution in the freezer (-20° Celsius necessary, -70° 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 dATP 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 3'-O-IVal-dATP: 3'-O-IVal-dATP is a new product and there are currently no corresponding references available.

Selected Reference for the Related Compound 3'-O-Ac-dATP (Cat. No. A 276):

Metzker, M.L.; Raghavachari, R.; Richards, S.; Jacutin, S.E.; Civitello, A.; Burgess, K.; Gibbs, R.A., *Nucl. Acid Res.*, **22**, 4259 - 4267 (1994): "Termination of DNA synthesis by novel 3'-modified-deoxyribonucleoside 5'-triphosphates"