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Technical Information about 3'-O-Me-GTP

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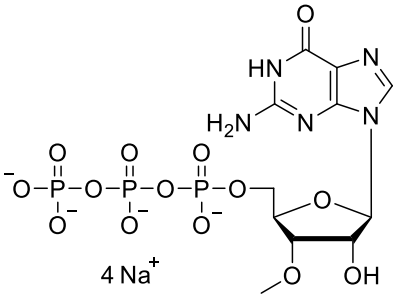

Abbreviation: **3'-O-Me-GTP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{11}H_{18}N_5O_{14}P_3$	[98923-57-0] (4 Na^+) / [61556-45-4] (H^+)	537.2 (free acid)	λ_{max} 252 nm / ε 13500 / pH 7	M 120

Name: 3'- O- Methylguanosine- 5'- O- triphosphate

Description: 3'-O-Me-GTP is an analogue of GTP in which the ribose 3'-hydroxy group has been modified by an ether bond to a methyl group.

Properties: 3'-O-Me-GTP is an RNA chain-terminating nucleotide that can be useful in DNA transcription studies.

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of 3'-O-Me-GTP 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 / 252 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-Me-GTP 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 GTP 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-Me-GTP:

Dvir, A.; Conaway, J.W.; Conaway, R.C., *Methods Enzymol.*, **370**, 733 - 740 (2003): "Assays for Investigating the Mechanism of Promoter Escape by RNA Polymerase II"

Wang, X.; Spangler, L.; Dvir, A., *J. Biol. Chem.*, **278**, 10250 - 10256 (2003): "Promoter Escape by RNA Polymerase II"

Dvir, A.; Conaway, R.C.; Conaway, J.W., *Proc. Natl. Acad. Sci. USA*, **94**, 9006 - 9010 (1997): "A Role for TFIIH in Controlling the Activity of early RNA Polymerase II Elongation Complexes"

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