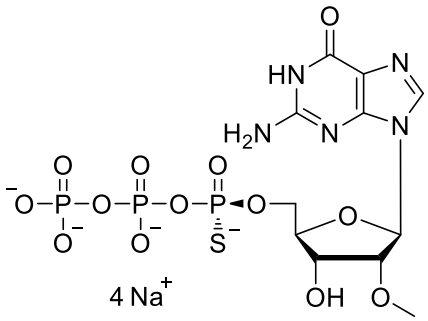
Technical Information about Rp-2'-O-Me-GTP-α-S

Update: August 09, 2019 HJ



Abbreviation: **Rp-2'-O-Me-GTP-α-S**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{11}H_{18}N_5O_{13}P_3S$ (free acid)	[143028-96-0]	553.3 (free acid)	λ_{max} 252 nm / ε 14300 / pH 7	M 122

Name: 2'-O-Methylguanosine-5'-O-(1-thiotriphosphate), Rp-isomer

Description: Rp-2'-O-Me-GTP-α-S is an analogue of guanosine-5'-O-triphosphate (GTP) in which the ribose 2'-hydroxy group has been methylated. In addition, one of the non-bridging oxygens in the R position of the α-phosphate is replaced by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus. The corresponding Sp-isomer is offered as well (Cat. No. M 113).

Properties: Rp-2'-O-Me-GTP-α-S is a phosphorothioate analogue of GTP with modified 2'-OH group, which is expected to have increased metabolic stability.

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of Rp-2'-O-Me-GTP-α-S are available upon request. Micromolar quantities are determined by UV at $\lambda_{max.}$ 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: Rp-2'-O-Me-GTP-α-S 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.
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