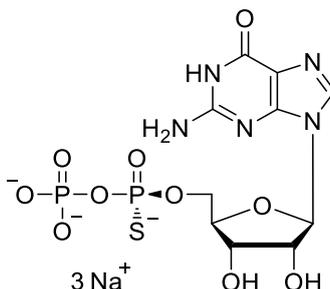


Technical Information about Rp-GDP- α -S

Update: October 18, 2018 HU



Abbreviation:

Rp-GDP- α -S

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₀ H ₁₅ N ₅ O ₁₀ P ₂ S for free acid	[71481-44-2]	459.3 for free acid	λ_{\max} 252 nm / ϵ 14300 / pH 7	G 012

Name: Guanosine- 5'- O- (1- thiodiphosphate), Rp- isomer

Description: Rp-GDP- α -S is the R-isomer of an analogue of guanosine diphosphate (GDP) in which a non-bridging oxygen in the α -phosphate is replaced by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus.

Properties: Rp-GDP- α -S is a modulator of GDP binding proteins with often increased metabolic stability. It can be used for characterization of GDP-responsive receptors and determination of their stereospecificity.

Specification: Sodium salt in aqueous solution (10 mM). The free acid or other salt forms are available upon request. Micro molar 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 / 252 nm). The product is not sterile and has not been tested for endotoxins.

Stability and Storage: Rp-GDP- α -S is relatively stable when stored as aqueous solution in the freezer (- 20° Celsius necessary, - 80° recommended), however, at ambient temperature the compound slowly starts to decompose forming GDP and other nucleotide fragments. Thus, in order to maintain its original high quality, and especially if you want to avoid the presence of any GDP, 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 content 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 nucleoside diphosphates have multiple tasks in every organism, it is likely that GDP 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 Rp-GDP- α -S:

Tucker, J.; Sczakiel, G.; Feuerstein, J.; John, J.; Goody, R.S.; Wittinghofer, A., *EMBO J.*, **5**, 1351 - 1358 (1986): "Expression of p21 Proteins in *Escherichia coli* and Stereochemistry of the Nucleotide-binding Site"

Yamanaka, G.; Eckstein, F.; Stryer, L., *Biochemistry*, **24**, 8094 - 8101 (1985): "Stereochemistry of the Guanyl Nucleotide Binding Site of Transducin Probed by Phosphorothioate Analogues of GTP and GDP"