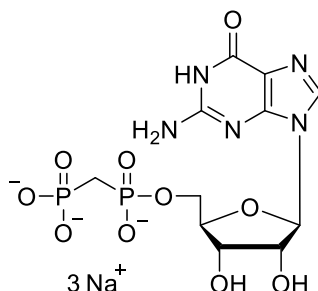


Technical Information about Guanosine- 5'- O- (α , β - methylene)diphosphate (GMP-CP)

Update: October 18, 2018 HU



Abbreviation:

GMP-CP / GOPCP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₁ H ₁₇ N ₅ O ₁₀ P ₂ for free acid	[32381-15-0]	441.2 for free acid	λ_{\max} 252 nm / ϵ 13500 / pH 7	G 024

Name: Guanosine- 5'- O- (α , β - methylene)diphosphate

Description: GMP-CP is an analogue of guanosine-5'-O-diphosphate (GDP) in which the bridging oxygen between the α - and the β -phosphate is replaced by a methylene group.

Properties: Hydrolytically stable analogue of GDP. Useful as starting structure for synthesis of α/β hydrolysis-resistant tri- and polyphosphates.

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: GMP-CP is relatively stable in aqueous solution. Nevertheless, the compound should be stored in the freezer (- 20° Celsius necessary, - 80° recommended). 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.

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 GMP-CP:

Vulevic, B.; Lobert, S.; Correia, J.J., *Biochemistry*, **36**, 12828 - 12835 (1997): "Role of Guanine Nucleotides in the Vinblastine-induced Self-Association of Tubulin: Effects of Guanosine Alpha,Beta-Methylenetriphosphate and Guanosine Alpha,Beta-Methylenediphosphate"

Sandoval I.V.; Jameson, J.L.; Niedel, J.; MacDonald, E.; Cuatrecasas, P., *Proc. Natl. Acad. Sci. USA*, **75**, 3178 - 3182 (1978): "Role of Nucleotides in Tubulin Polymerization: Effect of Guanosine 5'-Methylene Diphosphonate"