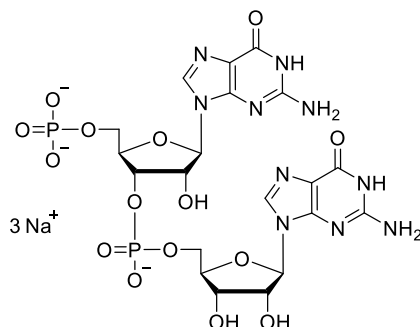


Technical Information about 5'- Phosphoguananylyl- (3' → 5')- guanosine

Update: April 30, 2019 HU



Abbreviation: **pGpG / 5'-p(rG)p(rG)**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₂₀ H ₂₆ N ₁₀ O ₁₅ P ₂ (free acid)	[33008-99-0]	708.4 (free acid)	λ _{max} 253 nm / ε 23000 / pH 7	P 023

Name: 5'- Phosphoguananylyl- (3' → 5')- guanosine / linear diguanylate

Description: In pGpG two 5'-GMP units are connected to form a linear dinucleotide.

Properties: pGpG is the first metabolic degradation product of the bacterial second messenger c-diGMP (BIOLOG Cat. No. C 057). A regulatory role of pGpG in c-diGMP signalling is discussed (Römling et al. 2005).

Specification: Crystallized or lyophilized sodium salt. The free acid or other salt forms are available upon request. Please keep in mind that equal concentrations of the compound may look different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small volume droplets. Normally the product is located in the conical bottom of the tube. Micromolar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 95% (HPLC / UV / 253 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: pGpG has excellent solubility in water and aqueous buffers. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

Stability and Storage: pGpG is chemically rather stable. Nevertheless, we recommend that the compound should be stored in the freezer, for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: 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 pGpG:

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Sudarsan, N.; Lee, E.R.; Weinberg, Z.; Moy, R.H.; Kim, J.N.; Link, K.H.; Breaker, R. R., *Science*, **321**, 411 - 413 (2008): "Riboswitches in Eubacteria Sense the Second Messenger cyclic di-GMP"

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