

PRODUCT INFORMATION



5'-pGpG (sodium salt)

Item No. 33889

Formal Name: 5'-O-phosphonoguanlyl-(3'→5')-guanosine, trisodium salt

Synonyms: c-di-GMP Control, Cyclic di-GMP Negative Control

MF: C₂₀H₂₃N₁₀O₁₅P₂ • 3Na

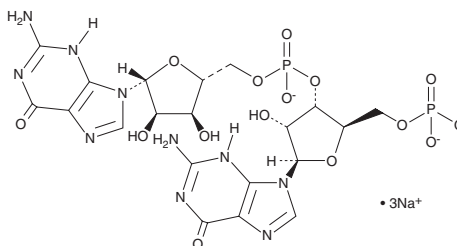
FW: 774.4

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

5'-pGpG (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the 5'-pGpG (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

5'-pGpG is a linearized form of cyclic di-GMP, a bacterial second messenger that activates the host innate immune system through stimulator of interferon genes (STING).¹⁻³ It is a metabolite of cyclic di-GMP (Item No. 17144) formed via hydrolysis by various phosphodiesterases (PDEs) that binds to the cyclic di-GMP-I riboswitch with reduced affinity compared to cyclic di-GMP.^{3,4} 5'-pGpG is intended for use as a negative control for cyclic di-GMP signaling.

References

1. Burdette, D.L., Monroe, K.M., Sotelo-Troha, K., *et al.* STING is a direct innate immune sensor of cyclic-di-GMP. *Nature* **478(7370)**, 515-518 (2011).
2. Parvatiyar, K., Zhang, Z., Teles, R.M., *et al.* DDX41 recognizes bacterial secondary messengers cyclic di-GMP and cyclic di-AMP to activate a type I interferon immune response. *Nat. Immunol.* **13(12)**, 1155-1161 (2012).
3. Römling, U., Galperin, M.Y., and Gomelsky, M. Cyclic di-GMP: The first 25 years of a universal bacterial second messenger. *Microbiol. Mol. Biol. Rev.* **77(1)**, 1-52 (2013).
4. Smith, K.D., Lipchock, S.V., and Strobel, S.A. Structural and biochemical characterization of linear dinucleotide analogues bound to the c-di-GMP-I aptamer. *Biochemistry* **51(1)**, 425-432 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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