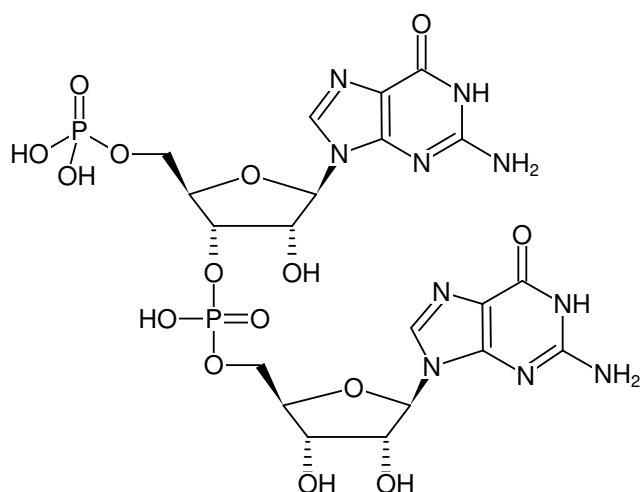


**pGpG**

P¹-(5'-Guanosyl)-P²-(5'-guanosyl)-(3'→5')-diphosphate, Sodium salt

Cat. No.	Amount
NU-534-1	1 mg



Structural formula of pGpG

For research use only!

Shipping: shipped on blue ice

Storage Conditions: store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

Molecular Formula: C₂₀H₂₆N₁₀O₁₅P₂ (free acid)

Molecular Weight: 708.43 g/mol (free acid)

Exact Mass: 708.11 g/mol (free acid)

CAS#: 33008-99-0

Purity: ≥ 95 % (HPLC)

Form: solid

Color: white to off-white

Spectroscopic Properties: λ_{max} 252 nm, ε 25.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Description:

The linear diguanylate pGpG is the first phosphodiesterase-catalyzed hydrolysis product of cyclic di-GMP (c-diGMP). C-diGMP has been identified as a novel second messenger in bacteria that triggers various physiological changes such as virulence gene expression or cell differentiation^[1-5]. The role of pGpG in c-diGMP signalling is under investigation.

Selected References:

[1] Roemling *et al.* (2005) C-diGMP: the Dawning of a novel bacterial signalling system. *Mol. Microbiol.* **57**:629.

[2] Hengge (2009) Principles of c-di-GMP signalling in bacteria. *Nat. Rev. Microbiol.* **7** (4):263.

[3] Sudarsan *et al.* (2008) Riboswitches in Eubacteria Sense the Second Messenger cyclic di-GMP. *Science* **321**:411.

[4] Rao *et al.* (2010) YybT is a Signaling Protein that Contains a Cyclic Dinucleotide Phosphodiesterase Domain and a GGDEF Domain with ATPase Activity. *J. Biol. Chem.* **285**:473.

[5] Christen *et al.* (2007) DgrA is a Member of a New Family of Cyclic Diguanosine Monophosphate Receptors and Controls Flagellar Motor Function in *Caulobacter crescentus*. *Proc. Nat. Acad. Sci. USA* **104**:4112.