

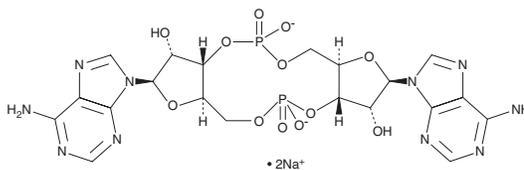
PRODUCT INFORMATION



Cyclic di-AMP (sodium salt)

Item No. 17753

CAS Registry No.: 2734909-87-4
Formal Name: adenylyl-(3'→5')-3'-adenylic acid, cyclic nucleotide, disodium salt
Synonyms: c-di-AMP, Cyclic di-Adenosine monophosphate, Cyclic diadenylate, 3',5'-Cyclic diadenylic acid
MF: C₂₀H₂₂N₁₀O₁₂P₂ • 2Na
FW: 702.4
Purity: ≥98%
UV/Vis.: λ_{max}: 205, 260 nm
Supplied as: A crystalline 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

Cyclic di-AMP (c-di-AMP) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the c-di-AMP (sodium salt) in the solvent of choice. The solubility of c-di-AMP (sodium salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

c-di-AMP is a second messenger produced by bacteria but not by mammals. Generated by a family of diadenylate cyclases, c-di-AMP can impact bacterial cell growth, cell wall homeostasis, pathogenicity, and other cellular functions.¹⁻³ Bacteria-derived cyclic dinucleotides, including c-di-AMP, trigger the expression of interferon genes in mammalian cells.^{4,5}

References

1. Schaap, P. Cyclic di-nucleotide signaling enters the eukaryote domain. *IUBMB Life* **65(11)**, 897-903 (2013).
2. Luo, Y. and Helmann, J.D. Analysis of the role of *Bacillus subtilis* σM in β-lactam resistance reveals an essential role for c-di-AMP in peptidoglycan homeostasis. *Mol. Microbiol.* **83(3)**, 623-639 (2012).
3. Corrigan, R.M. and Gründling, A. Cyclic di-AMP: Another second messenger enters the fray. *Nat. Rev. Microbiol.* **11**, 513-524 (2013).
4. Konno, H., Konno, K., and Barber, G.N. Cyclic dinucleotides trigger ULK1 (ATG1) phosphorylation of STING to prevent sustained innate immune signaling. *Cell* **155(3)**, 688-698 (2013).
5. Gao, P., Ascano, M., Zillinger, T., et al. Structure-function analysis of STING activation by c[G(2',5')pA(3',5')] and targeting by antiviral DMXAA. *Cell* **154(4)**, 748-762 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

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