

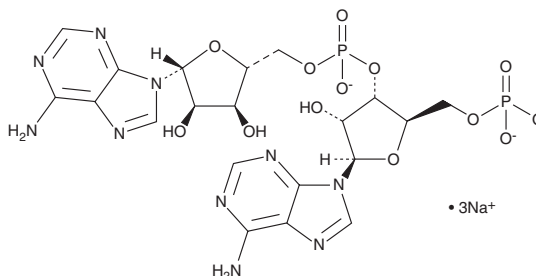
PRODUCT INFORMATION



5'-pApA (sodium salt)

Item No. 33886

Formal Name:	5'-O-phosphoadenylyl-(3'→5')-adenosine, trisodium salt
Synonyms:	c-di-AMP Control, Cyclic di-AMP Negative Control
MF:	C ₂₀ H ₂₃ N ₁₀ O ₁₃ P ₂ • 3Na
FW:	742.4
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



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

Laboratory Procedures

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

Description

5'-pApA is a linearized form of cyclic di-AMP, a bacterial second messenger that activates the host innate immune system through stimulator of interferon genes (STING).¹⁻⁴ It is a metabolite of cyclic di-AMP (Item No. 17753) formed via hydrolysis by various phosphodiesterases (PDEs).⁵ 5'-pApA is intended for use as a negative control for cyclic di-AMP 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. Woodward, J.J., Iavarone, A.T., and Portnoy, D.A. c-di-AMP secreted by intracellular *Listeria monocytogenes* activates a host type I interferon response. *Science* **328**(5986), 1703-1705 (2010).
4. Witte, C.E., Whiteley, A.T., Burke, T.P., *et al.* Cyclic di-AMP is critical for *Listeria monocytogenes* growth, cell wall homeostasis, and establishment of infection. *mBio* **4**(3), e00282-13 (2013).
5. Fahmi, T., Port, G.C., and Cho, K.H. c-di-AMP: An essential molecule in the signaling pathways that regulate the viability and virulence of gram-positive bacteria. *Genes (Basel)* **8**(8), 197 (2017).

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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