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UNLOCK SIGNALING PATHWAYS WITH CYCLIC OLIGONUCLEOTIDES



**Cyclic Di- and Trinucleotides –
Key Players in Cellular Signaling**

Nucleotides & Nucleosides



UNLOCK SIGNALING PATHWAYS WITH CYCLIC OLIGONUCLEOTIDES

Cyclic dinucleotides (CDNs) and **cyclic trinucleotides (CTNs)** are a class of second messengers found in various organisms. These molecules consist of two or three nucleotides linked by phosphodiester bonds, forming a ring-like structure. Their unique architecture allows them to act as signaling molecules with essential roles in bacterial communication and immune response activation ^[1,2].

Explore our **website** at:

<https://www.jenabioscience.com/nucleotides-nucleosides/nucleotides-by-structure/cyclic-nucleotides>

→ Our portfolio of cyclic di- and tri-nucleotides

Base Composition		Chemical linkage				
		3', 3'	3', 2'	2', 3'	2', 2'	3', 3', 3'
Purine	cGGMP	✓				
	cAAMP	✓				
	cGAMP	✓		✓		
	cAAA					✓
	cAAG					✓
Purine-Pyrimidine Hybrid	cCAMP	✓	✓	✓	✓	
	cUAMP		✓	✓	✓	

Our CDNs and CTNs are **endotoxin free** (≤ 2.5 EU/ml by chromogenic LAL test) and thus **ideally suited for cell culture applications**.

Products	Cat. No.
cyclic-di-AMP 3',3'-cyclic AMP-AMP, c-di-AMP, cAAMP	NU-954
cyclic-di-GMP 3',3'-cyclic GMP-GMP, c-di-GMP, cGGMP	NU-951
3',3'-cGAMP 3',3'-cyclic GMP-AMP	NU-986
2',3'-cGAMP 2',3'-cyclic GMP-AMP	NU-249
3',3'-cCAMP 3',3'-cyclic CMP-AMP	NU-457
3',2'-cCAMP 3',2'-cyclic CMP-AMP	NU-454
2',3'-cCAMP 2',3'-cyclic CMP-AMP	NU-452
2',2'-cCAMP 2',2'-cyclic CMP-AMP	NU-450
3',2'-cUAMP 3',2'-cyclic UMP-AMP	NU-455
2',3'-cUAMP 2',3'-cyclic UMP-AMP	NU-453
2',2'-cUAMP 2',2'-cyclic UMP-AMP	NU-451
3',3',3'-cAAG 3',3',3'-cyclic AMP-AMP-GMP	NU-456
cyclic-tri-AMP 3',3',3'-cyclic AMP-AMP-AMP, c-tri-AMP	NU-458

[1] Wenzl *et al.* (2024), *FEBS Lett.* **598(8)**: 839.

[2] Whiteley *et al.* (2019), *Nature* **567(7747)**: 194.