

PRODUCT INFORMATION



2'2'-cGAMP (sodium salt)

Item No. 22419

Formal Name: adenylyl-(2' → 5')-2'-guanylic acid, cyclic nucleotide, disodium salt

Synonyms: Adenosine-Guanosine 2',2'-cyclic monophosphate, cGAMP(2'-5'), 2',2'-Cyclic GMP-AMP

MF: C₂₀H₂₂N₁₀O₁₃P₂ • 2Na

FW: 718.4

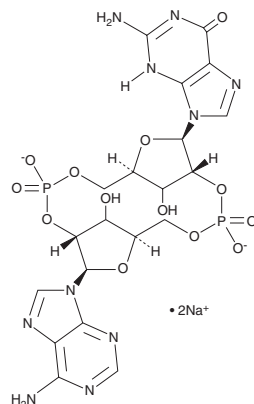
Purity: ≥98%

UV/Vis.: λ_{max}: 256 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

2'2'-cGAMP (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 2'2'-cGAMP (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

2'2'-cGAMP is a synthetic dinucleotide (CDN) that contains non-canonical 2'5'-phosphodiester bonds.¹ It binds to the adapter protein stimulator of interferon genes (STING; Item Nos. 22816 | 22815), which is a component of the innate immune response that activates the type I interferon pathway when bound to cyclic dinucleotides. 2'2'-cGAMP shows weaker binding to STING than 2'3'-cGAMP (Item No. 19887; K_d = 287 and 3.79 nM, respectively) but binds more strongly than 3'3'-cGAMP (Item No. 17966), cyclic di-GMP (Item No. 17144), or 3'2'-cGAMP, which bind in the micromolar range (K_ds = 1.04, 1.21, or 1.61 μM, respectively).¹ Despite weaker binding, 2'2'-cGAMP induces IFN-β production in the same concentration range as 2'3'-cGAMP (EC₅₀s = 15.8 and 19.4 nM, respectively, in L929 cells).

Reference

1. Zhang, X., Shi, H., Wu, J. *et al.* Cyclic GMP-AMP containing mixed phosphodiester linkages is an endogenous high-affinity ligand for STING. *Mol. Cell* **51**(2), 226-235 (2015).

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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