

Catalog # 10-1639

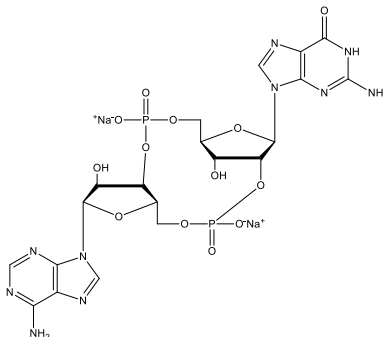
2',3'-cGAMP

CAS 1441190-66-4

2',3'-cyclic GMP-AMP, 2Na

Adenylyl-(3'5')-2'guanylic acid, cyclic nucleotide, disodium salt

Lot # X108230



Endogenous STING (stimulator of interferon genes) agonist.¹ Produced from ATP and GTP via the action of cGMP-AMP synthase (cGAS) which acts as a cytosolic DNA sensor.^{2,3} Induces autophagy which is a mechanism for clearance of DNA and viruses in the cytosol.⁴ DNA damage stimulates 2',3'-cGAMP which stimulates an inflammatory response.⁵

- 1) Zhang *et al.* (2015), *Cyclic GMP-AMP containing mixed phosphodiester linkages is an endogenous high-affinity ligand for STING*; *Mol. Cell*, **51** 226
- 2) Wu *et al.* (2013), *Cyclic GMP-AMP is an endogenous second messenger in innate immune signaling by cytosolic DNA*; *Science*, **339** 826
- 3) Sun *et al.* (2013), *Cyclic GMP-AMP is a cytosolic DNA sensor that activates the type I interferon pathway*; *Science*, **339** 786
- 4) Gui *et al.* (2019), *Autophagy induction via STING trafficking is a primordial function of the cGAS pathway*; *Nature*, **567** 262
- 5) Li and Chen (2018), *The cGAS-cGAMP-STING pathway connects DNA damage to inflammation, senescence and cancer*; *J. Exp. Med.*, **215** 1287

PHYSICAL DATA

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|------------------------|--|
| Molecular Weight: | 718.37 |
| Molecular Formula: | C ₂₀ H ₂₂ N ₁₀ Na ₂ O ₁₃ P ₂ |
| Purity: | 98% by HPLC |
| | MS: (Conforms) |
| Solubility: | Soluble in DMSO (up to 50 mg/ml) or in water (up to 10 mg/ml) |
| Physical Description: | White to colorless lyophilized solid |
| Storage and Stability: | Store as supplied, desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or water may be stored at -20°C for up to 1 month. |

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