

# Certificate of Analysis

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**Product Name:** 2',3'-cGAMP sodium salt

**Catalog No.:** 5945

**Batch No.:** 10

**CAS Number:** 2734858-36-5

**IUPAC Name:** 2',3'-Cyclic guanosine monophosphate-adenosine monophosphate sodium salt

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>22</sub>N<sub>10</sub>Na<sub>2</sub>O<sub>13</sub>P<sub>2</sub>

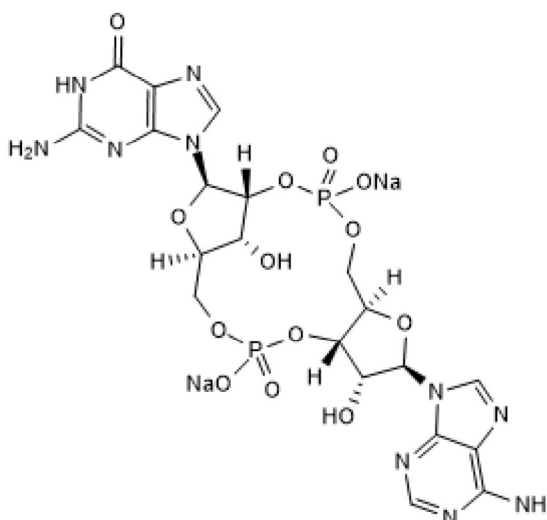
**Batch Molecular Weight:** 718.37

**Physical Appearance:** solid

**Solubility:** water to 50 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.7% purity

**Mass Spectrum:** Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

2',3'-cGAMP sodium salt is an endogenous high affinity STING agonist ( $K_d$  values are 3.79 and 120 nM for human and rat STING, respectively). Induces repolarization of M2 macrophages in vitro. This product is sold in units of 359µg, equivalent to 0.5µmol.

**Physical and Chemical Properties:**

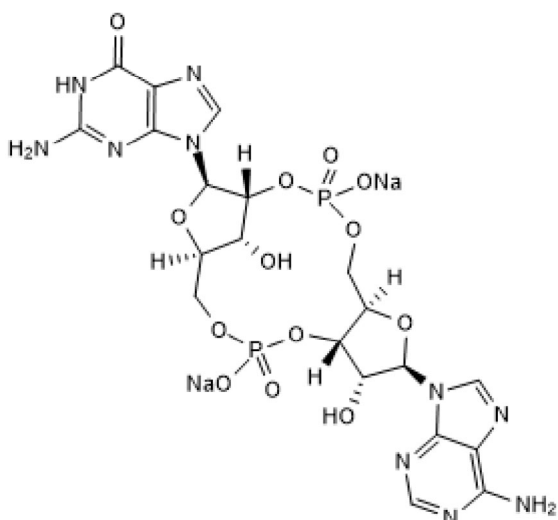
Batch Molecular Formula:  $C_{20}H_{22}N_{10}Na_2O_{13}P_2$

Batch Molecular Weight: 718.37

Physical Appearance: solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 50 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Zhang et al** (2015) Rat and human STINGs profile similarly towards anticancer/antiviral compounds. *Sci.Rep.* **5** 18035. PMID: 26669264.

**Downey et al** (2014) DMXAA causes tumor site-specific vascular disruption in murine non-small cell lung cancer, and like the endogenous non-canonical cyclic dinucleotide STING agonist, 2',3'-cGAMP, induces M2 macrophage repolarization. *PLoS One* **9** e99988. PMID: 24940883.

**Zhang et al** (2013) Cyclic GMP-AMP containing mixed phosphodiester linkages is an endogenous high-affinity ligand for STING. *Mol.Cell.* **51** 226. PMID: 23747010.

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