

**Product Name:** c-Di-GMP sodium salt

**Catalog No.:** 5900

**Batch No.:** 5

CAS Number: 2222132-40-1

IUPAC Name: 3',5'-Cyclic diguanylic acid 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>14</sub>P<sub>2</sub>

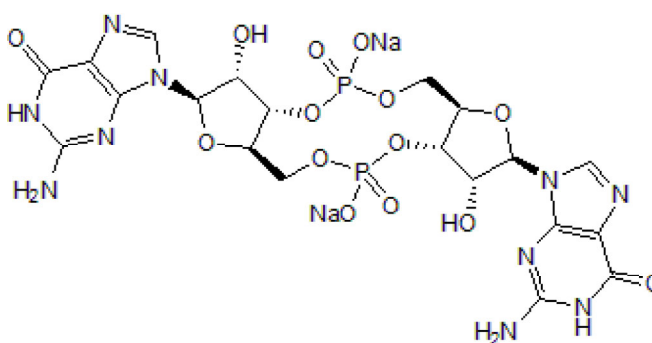
**Batch Molecular Weight:** 734.37

**Physical Appearance:** lyophilised solid

**Solubility:** water to 20 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.8% purity

**Mass Spectrum:** Consistent with structure

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

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**Catalog No.:** 5900

**5**

CAS Number: 2222132-40-1

IUPAC Name: 3',5'-Cyclic diguanylic acid sodium salt

**Description:**

c-Di-GMP sodium salt is an endogenous STING and DDX41 agonist; mediates DDX41-STING interaction. Activates STING-dependent IFN- $\beta$  production in mouse and human cells. Also induces an antitumor response in a lung B16-10 melanoma mouse model, when administered intravenously within YSKO5-liposomes. This product is sold in units of 730 $\mu$ g, equivalent to 1 $\mu$ mol.

**Physical and Chemical Properties:**

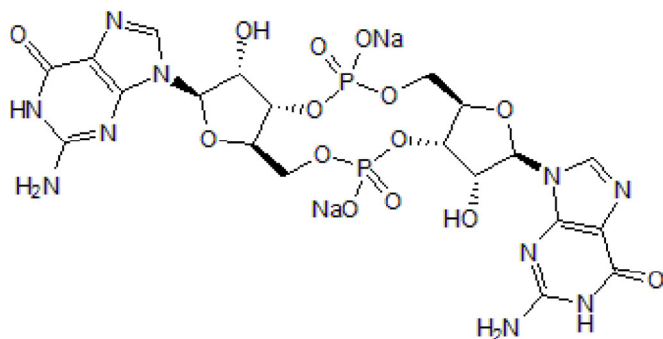
Batch Molecular Formula: C<sub>20</sub>H<sub>22</sub>N<sub>10</sub>Na<sub>2</sub>O<sub>14</sub>P<sub>2</sub>

Batch Molecular Weight: 734.37

Physical Appearance: lyophilised solid

**Minimum Purity:**  $\geq$ 98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 20 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:**

**Nakamura *et al*** (2015) Liposomes loaded with a STING pathway ligand, cyclic di-GMP, enhance cancer immunotherapy against metastatic melanoma. *J.Control Release* **216** 149. PMID: 26282097.

**Parvatiyar *et al*** (2012) The helicase DDX41 recognizes the bacterial secondary messengers cyclic di-GMP and cyclic di-AMP to activate a type I IF. immune response. *Nat.Immunol.* **13** 1155. PMID: 23142775.

**Burdette *et al*** (2011) STING is a direct innate immune sensor of cyclic di-GMP. *Nature* **478** 515. PMID: 21947006.

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