2',3'-cGAMP Sodium Salt

Catalog No.C13039 Batch:C1303903

Product Datasheet

Technical Data

Formula	$C_{20}H_{22}N_{10}Na_2O_{13}P_2$					
Molecular Weight	718.37	**CAS No.**	2734858-36-5			
Solubility (25°C)*	In vitro	DMSO	100 mg/mL (139.2 mM)			
		Water	100 mg/mL (139.2 mM)			
		Ethanol	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.3920 mL	6.9602 mL	13.9204 mL
5 mM	0.2784 mL	1.3920 mL	2.7841 mL
10 mM	0.1392 mL	0.6960 mL	1.3920 mL
50 mM	0.0278 mL	0.1392 mL	0.2784 mL

Biological Activity

Description	2',3'-cGAMP Sodium Salt (2'-3'-cyclic GMP-AMP Sodium) is produced in response to DNA in the cytoplasm in mammalian cells and binds **STING** with high affinity and is an effective inducer of **interferon-β (IFNβ)**. 2',3'-cGAMP binds to **STING** with Kd of 3.79 nM.
Targets	STING [1] (Cell-free assay) 3.79 nM(Kd)
In vitro	2',3'-cGAMP is an endogenous second messenger produced by mammalian cells. 2',3'-cGAMP is a high affinity ligand for STING. 2',3'-cGAMP is a potent inducer of type-I interferons. 2',3'-cGAMP binding induces conformational changes of STING.[1]
Density	g/mL

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  A549, BSC-40, BSR-T7, Vero cells
- **Concentrations**
  25 μM, 20 μM, 2.5 μM
- **Incubation Time**
  30 min
- **Method**
  A549 cells are infected at an MOI of 5 with WT VACV or VACV-ΔPoxin and lysed 5 hpi. As a positive control, cells are permeabilized for 30 min with digitonin buffer (10 μg ml−1 digitonin, 50 mM HEPES-KOH pH 7.5, 100 mM KCl, 3 mM MgCl2, 0.1 mM DTT, 85 mM sucrose, 0.2% BSA, 1 mM ATP, and 0.1 mM GTP) and stimulated with or without 25 μM 2',3'-cGAMP. After stimulation, the cells are washed once with DMEM supplemented with 10% FBS, media is replaced, and cells are incubated 5 h before lysis.

References

https://pubmed.ncbi.nlm.nih.gov/23747010/ https://pubmed.ncbi.nlm.nih.gov/30728498/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

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