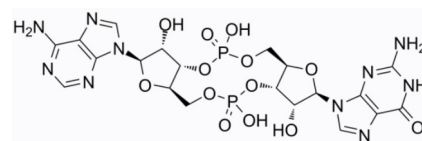


3'3'-cGAMP (sodium salt)

Endogenous second messenger in metazoans and triggers interferon production in response to cytosolic DNA; STING ligand.

Product Description

Catalog #:	B2UZE4, 5mg B2UZE5, 25mg
Name:	3'3'-cGAMP (sodium salt) CAS : 849214-04-6
MW :	674.41
Formula :	C ₂₀ H ₂₄ N ₁₀ O ₁₃ P ₂
Properties :	Purity: 98%
Storage:	Powder: -20°C In solvent: -80°C (6 months) -20°C (1 month)
For Research Use Only	



Introduction

3'3'-cGAMP Fluorinated (c-[2'^FdGMP]-[2'^FdAMP]) is a synthetic analog of cyclic guanosine monophosphate-adenosine monophosphate (cyclic GMP-AMP, cGAMP) with a fluorine atom at 2' position of the nucleosides. 3'3'-cGAMP is a cyclic di-nucleotide produced by bacteria. It is also referred to as "canonical" cGAMP due the presence of the classical 3'-5' phosphodiester linkages between the guanosine and the adenosine. It has been reported that cGAMP binds STING (stimulator of IFN genes) and subsequently induces TBK1-IRF3-dependent production of IFN-β [1]. The incorporation of fluorine into biologically active molecules is commonly used in medicinal chemistry to improve their metabolic stability or to modulate physicochemical properties such as lipophilicity [2, 3]. Moreover, the introduction of a fluorine atom can change the biological activities of a molecule. Interestingly, when used at low concentrations in various cellular assays, 3'3'-cGAMP Fluorinated induces higher levels of type I IFNs than does cGAMP. STING ligands such as cGAMP induce type I IFNs and activate interferon stimulated genes (ISG) through IRFs. To facilitate their study, InvivoGen has developed stable reporter cells in two well established immune cell models: THP-1 human monocytes and RAW 264.7 murine macrophages. These cells express a reporter gene (SEAP or Lucia luciferase), under control of an IRF-inducible promoter.

In Vitro

H₂O : 20 mg/mL (29.66 mM; Need ultrasonic)
DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)

References

- [1]. Zhang X. et al., 2013. Cyclic GMP-AMP containing mixed phosphodiester linkages is an endogenous high-affinity ligand for STING. *Mol Cell*.51(2):226-35.
- [2]. Liu P. et al., 2008. Fluorinated Nucleosides: Synthesis and biological implication. *J Fluor Chem*. 129(9): 743-766.
- [3]. Böhm HJ. et al., 2004. Fluorine in medicinal chemistry. *Chembiochem*. 5(5):637-43.

Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>.

FT-B2UZE4

Please contact InterBioTech – Interchim for any other information

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