

PRODUCT INFORMATION



Cyclic -diIMP (sodium salt)

Item No. 22485

Formal Name: inosinylyl-(3' → 5')-3'-inosinic acid, cyclic nucleotide, disodium salt

Synonym: c-di-IMP, Cyclic di-inosine monophosphate

MF: C₂₀H₂₀N₈O₁₄P₂ • 2Na

FW: 704.3

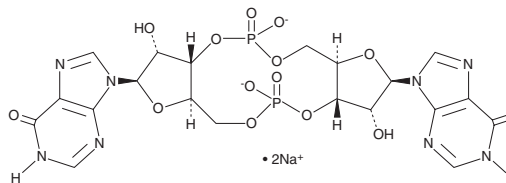
Purity: ≥95%

UV/Vis.: λ_{max}: 249 nm

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cyclic di-IMP (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the cyclic di-IMP (sodium salt) in water. The solubility of cyclic di-IMP (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Cyclic di-IMP (sodium salt) (c-di-IMP) is a synthetic second messenger structurally related to the bacterial second messengers cyclic di-GMP (Item No. 17144) and cyclic di-AMP (Item No. 17753).¹ C-di-IMP has adjuvant properties when co-administered with antigens *in vitro* and by mucosal routes *in vivo*. C-di-IMP enriches the population of MHC class I and II, CD80, CD86, CD40, and CD54 positive dendritic cells derived from murine bone marrow. It also stimulates macrophages at 500 ng/ml. Mice immunized with β-galactosidase (β-gal) plus c-di-IMP through the intranasal route show a humoral immune response, evidenced by an increase in IgG titers up to 2-fold compared to mice immunized with β-gal alone. Mice immunized with β-gal plus c-di-IMP also exhibit a Th1/Th2 response, indicating that the adjuvant activity of c-di-IMP leads to a cellular immune response as well.

Reference

1. Libanova, R., Ebensen, T., Schulze, K., *et al.* The member of the cyclic di-nucleotide family bis-(3', 5')-cyclic dimeric inosine monophosphate exerts potent activity as mucosal adjuvant. *Vaccine* **28(10)**, 2249-2258 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/02/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM