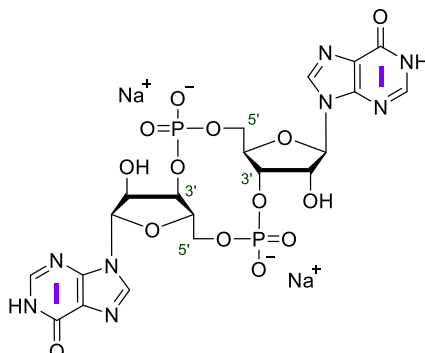


## Technical Information about c-diIMP

Update: April 18, 2019 HU



**Abbreviation:** **c-diIMP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>20</sub> H <sub>22</sub> N <sub>8</sub> O <sub>14</sub> P <sub>2</sub> (for free acid)	[79940-41-3]	660.4 (for free acid)	λ <sub>max</sub> 249 nm / ε 21600 / pH 7	C 105

**Name:** Cyclic diinosine monophosphate (c-diIMP / c-di-IMP) / Bis-(3', 5')-cyclic dimeric inosine monophosphate

**Description:** In c-diIMP two 5'-IMP units are connected to form a cyclic structure.

**Properties:** c-diIMP is an analogue of the bacterial second messengers c-diAMP (Cat. No. C 088) and c-diGMP (Cat. No. C 057) which was found to exhibit potent adjuvant properties in mucosal vaccination (Libanova et al. 2010).

**Specification:** Crystallized or lyophilized sodium salt. Please keep in mind that equal amounts of the compound may look different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small volume droplets. Normally the product is located in the conical bottom of the tube. Micro molar quantities are determined by UV at λ<sub>max</sub>.

**Purity:** Typical analysis is better than 95% (HPLC / UV / 249 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility:** c-diIMP has good solubility in water, limits have not been determined. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

**Stability and Storage:** c-diIMP has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless, we recommend that the compound should be stored in the freezer, for longer storage periods preferably in freeze-dried form.

**Toxicity and Safety:** Please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.

Our products are designed, developed and sold for research purposes only! They are intended for *in vitro* and nonhuman *in vivo* laboratory applications. Any other use requires approval of health authorities.

**Not for drug, household or related uses!**

### Selected References for c-diIMP:

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Ching, S.M.; Tan, W.J.; Chua, K.L.; Lam, Y., *Bioorg. Med. Chem.*, **18**, 6657 - 6665 (2010): "Synthesis of Cyclic Di-nucleotidic Acid as Potential Inhibitors Targeting Diguanylate Cyclase"

Libanova, R.; Ebensen, T.; Schulze, K.; Bruhn, D.; Nörder, M.; Yevsa, T.; Morr, M.; Guzman, C.A., *Vaccine*, **28**, 2249 - 2258 (2010): "The Member of the Cyclic Di-Nucleotide Family Bis-(3', 5')-Cyclic Dimeric Inosine Monophosphate Exerts Potent Activity as Mucosal Adjuvant"

Ross, P.; Mayer, R.; Weinhouse, H.; Amikam, D.; Huggirat, Y.; Benziman, M.; de Vroom, E.; Fidder, A.; de Paus, P.; Sliedregt, L.A.J.M.; van der Mare, G.A.; van Boom, J.H., *J. Biol. Chem.*, **265**, 18933 - 18943 (1990): "The Cyclic Diguanylic Acid Regulatory System of Cellulose Synthesis in *Acetobacter xylinum*. Chemical Synthesis and Biological Activity of Cyclic Nucleotide Dimer, Trimer, and Phosphothioate Derivatives"