

Product Data Sheet

Product Name: Cyclic di-UMP (sodium salt)

Cat. No.: GC48397

Chemical Properties

Cas. No.

SMILES [O-]P1(OC[C@@]2([H])O[C@](N3C=CC(NC3=O)=O)([H])[C@H](O)[C@@]2(OP([O-])(OC[C@]([H])([C@]4(O1)[H])O[C@](N5C=CC(NC5=O)=O)([H])[C@@H]4O)=O)[H])=O.[Na+].[Na+]

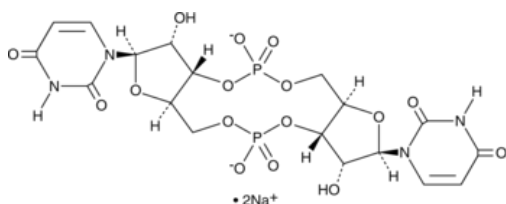
Formula C₁₈H₂₀N₄O₁₆P₂•2Na M.Wt 656.3

Solubility Water: soluble Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Cyclic di-UMP is a pyrimidine-containing cyclic dinucleotide (CDN).¹ It is produced by bacterial cGAS/DncV-like nucleotidyltransferases (CD-NTases), such as LpCdnE02 from *L. pneumophila*, and binds to cGAS, in the apo or dsDNA-bound forms, with reduced affinity compared to 2'3'-cGAMP or 3'3'-cGAMP.^{1,2} Cyclic di-UMP is intended for use as a negative control for cyclic di-GMP signaling.

1. Whiteley, A.T., Eaglesham, J.B., de Oliveira Mann, C.C., et al. Bacterial cGAS-like enzymes synthesize diverse nucleotide signals. *Nature* 564(7747):194-199 (2019)
2. Hall, J., Ralph, E.C., Shanker, S., et al. The catalytic mechanism of cyclic GMP-AMP synthase (cGAS) and implications for innate immunity and inhibition. *Protein Sci.* 26(12):2367-2380 (2017)

Caution: Product has not been fully validated for medical applications. For research use only.

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