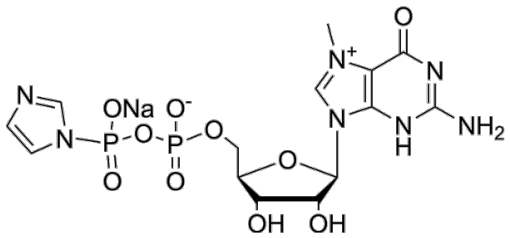
Product Data Sheet

Product Name: Im-m7GDP sodium
Cat. No.: GC79991

Chemical Properties

Cas. No.	240137-51-3		
Formula	$C_{14}H_{18}N_7NaO_{10}P_2$	M.Wt	529.27
Solubility	H_2O: 100 mg/mL (188.94 mM; Need ultrasonic)	Storage	Store at -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

Im-m7GDP sodium is a capping reagent and also the P-imidazolide of N7-methylguanosine 5'-diphosphate. Im-m7GDP sodium introduces an m7G cap structure to the monophosphate group of branched oligoribonucleotides, and is used in nucleic acid synthesis-related research [1] [2] [3].

In Vitro, Im-m7GDP (10 mM; 3 h) sodium efficiently introduces an m7G cap structure to the 5′

phosphorylated branched strand of synthetic oligoribonucleotides under the specified reaction conditions[2]. Im-m7GDP (10 mM; 3 h) sodium effectively introduces a cap structure onto 5′-monophosphorylated 68-nt chemically synthesized RNA in a cell-free in vitro reaction[3].

References:

[1]. Geng J, et al. Cap-related modifications of RNA regulate binding to IFIT proteins. RNA (New York, N.Y.). 2024 Sep 16;30(10):1292-1305.
[2]. Fukuchi K, et al. Internal cap-initiated translation for efficient protein production from circular mRNA. Nature biotechnology. 2026 Jan;44(1):120-132.
[3]. Ohashi S, et al. Selection of Short 5'-UTR of Chemically Synthesized mRNA to Improve Translation Efficiency. Chemical & pharmaceutical bulletin. 2025;73(5):449-456.

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA