

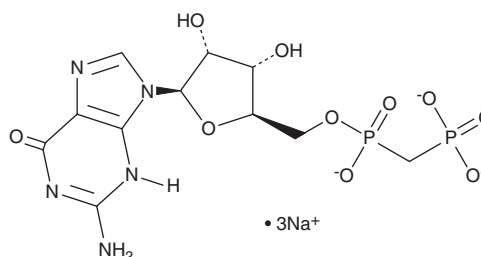
PRODUCT INFORMATION



Guanosine 5'-methylendiphosphate (sodium salt)

Item No. 38378

Formal Name: guanosine, 5'-[hydrogen P-(phosphonomethyl) phosphonate], trisodium salt
Synonyms: Guanosine-5'-O-(α,β -methylene)diphosphate, GMP(CH₂)P, GMP-CP, GpCH₂p
MF: C₁₁H₁₄N₅O₁₀P₂ • 3Na
FW: 507.2
Purity: ≥95%
Supplied as: A solution in water
Storage: -20°C
Stability: ≥4 years



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

Description

Guanosine 5'-methylendiphosphate is an inhibitor of ecto-5'-nucleotidase, also known as CD73 ($K_i = 410$ nM for the recombinant human enzyme).¹ It also induces tubulin polymerization when used at a concentration of 1 mM.² Guanosine 5'-methylendiphosphate has been used as a precursor in the synthesis of hydrolysis-resistant affinity resins for the purification of mRNA cap-binding proteins such as eukaryotic translation initiation factor 4E (eIF4E).³

References

1. Bhattarai, S., Pippel, J., Scaletti, E., *et al.* 2-substituted α,β -methylene-ADP derivatives: Potent competitive ecto-5'-nucleotidase (CD73) inhibitors with variable binding modes. *J. Med. Chem.* **63**(6), 2941-2957 (2020).
2. Sandoval, I.V., Jameson, J.L., Niedel, J., *et al.* Role of nucleotides in tubulin polymerization: Effect of guanosine 5'-methylene diphosphonate. *Proc. Natl. Acad. Sci. USA* **75**(7), 3178-3182 (1978).
3. Szczepaniak, S.A., Zuberek, J., Darzynkiewicz, E., *et al.* Affinity resins containing enzymatically resistant mRNA cap analogs--A new tool for the analysis of cap-binding proteins. *RNA* **18**(7), 1421-1432 (2012).

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.

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