

PRODUCT INFORMATION



Purine riboside-5'-O-triphosphate (sodium salt)

Item No. 38491

CAS Registry No.: 35892-95-6

Formal Name: 9-[5-O-[hydroxy[[hydroxy(phosphono oxy)phosphinyl]oxy]phosphinyl]-β-D-ribofuranosyl]-9H-purine, tetrasodium salt

Synonyms: PRTP, Purine Riboside Triphosphate, PTP, PuTP

MF: $C_{10}H_{11}N_4O_{13}P_3 \cdot 4Na$

FW: 580.1

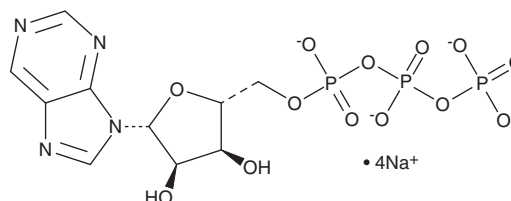
Purity: ≥95%

Supplied as: A solution in water

Storage: -80°C

Stability: ≥4 years

Item Origin: Synthetic



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

Description

Purine riboside-5'-O-triphosphate (PRTP) is an active metabolite of the antiviral, antibacterial, and anticancer agent nebularine (Item No. 31329).¹ It is formed from nebularine by adenosine kinase, which results in depletion of intracellular ATP levels and induces cell death in isolated rat thymocytes, an effect that can be reduced by the adenosine kinase inhibitor 5-iodotubercidin (Item No. 10010375). PRTP is an inhibitor of DNA primase ATP and GTP polymerization activities (IC_{50} s = 35 and 28 μ M, respectively, for the human enzyme) and of calmodulin-dependent protein kinase II (CaMKII; K_i = 590 μ M).^{2,3}

References

1. Kozłowska, M., Smolenski, R.T., Makarewicz, W., *et al.* ATP depletion, purine riboside triphosphate accumulation and rat thymocyte death induced by purine riboside. *Toxicol. Lett.* **104(3)**, 171-181 (1999).
2. Moore, C.L., Zivkovic, A., Engels, J.W., *et al.* Human DNA primase uses Watson-Crick hydrogen bonds to distinguish between correct and incorrect nucleoside triphosphates. *Biochemistry* **43(38)**, 12367-12374 (2004).
3. Kwiatkowski, A.P. and King, M.M. Mapping of the adenosine 5'-triphosphate binding site of type II calmodulin-dependent protein kinase. *Biochemistry* **26(24)**, 7636-7640 (1987).

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.

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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