

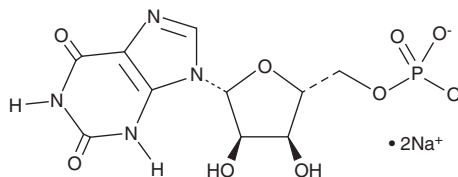
PRODUCT INFORMATION



Xanthosine 5'-monophosphate (sodium salt)

Item No. 18134

CAS Registry No.: 25899-70-1
Formal Name: 5'-xanthylic acid, disodium salt
Synonym: XMP
MF: C₁₀H₁₁N₄O₉P • 2Na
FW: 408.2
Purity: ≥95%
UV/Vis.: λ_{max}: 250 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Xanthosine 5'-monophosphate (XMP) (sodium salt) is supplied as a crystalline solid. XMP (sodium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of XMP (sodium salt) be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of XMP (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

XMP is an intermediate in purine metabolism, the product of the rate limiting step in the generation of guanosine monophosphate, which is important for DNA, RNA, and glycoprotein synthesis. XMP is generated from inosine-5'-monophosphate (IMP; Item No. 18135) by IMP dehydrogenase (IMPDH). Inhibitors of IMPDH, including ribavirin (Item No. 16757) and mycophenolate mofetil (Item No. 13988), have potential applications as antiviral and anti-cancer drugs.¹⁻³

References

1. Watkins, W.J., Chen, J.M., Cho, A., *et al.* Phosphonic acid-containing analogues of mycophenolic acid as inhibitors of IMPDH. *Bioorg. Med. Chem. Lett.* **16(13)**, 3479-3483 (2006).
2. Naik, G.S. and Tyagi, M.G. A pharmacological profile of ribavirin and monitoring of its plasma concentration in chronic hepatitis C infection. *J. Clin. Exp. Hepatol.* **2(1)**, 42-54 (2012).
3. Borden, K.L.B. and Culjkovic-Kraljacic, B. Ribavirin as an anti-cancer therapy: Acute myeloid leukemia and beyond? *Leuk. Lymphoma* **51(10)**, 1805-1815 (2010).

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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