

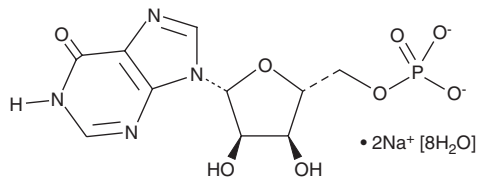
PRODUCT INFORMATION



Inosine-5'-monophosphate (sodium salt hydrate)

Item No. 18135

CAS Registry No.: 20813-76-7
Formal Name: 5'-Inosinic acid, disodium salt octohydrate
Synonyms: IMP, Inosinic Acid
MF: C₁₀H₁₁N₄O₈P • 2Na [8H₂O]
FW: 536.3
Purity: ≥95%
UV/Vis.: λ_{max}: 249 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

Inosine-5'-monophosphate (sodium salt hydrate) is supplied as a crystalline solid. Aqueous solutions of inosine-5'-monophosphate (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of inosine-5'-monophosphate (sodium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

IMP is a substrate of IMP dehydrogenase (IMPDH), a NAD⁺-dependent enzyme that generates xanthosine monophosphate. This is a rate-limiting step in the generation of guanosine monophosphate, which is important for DNA, RNA, and glycoprotein synthesis. 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 5-Ribonucleosides, including IMP, are also involved in potentiating the umami taste sensation.⁴

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**, 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).
4. Kinnamon, S.C. Umami taste transduction mechanisms. *Am. J. Clin. Nutr.* **90(suppl)**, 753S-755S (2009).

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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