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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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- Expressversand

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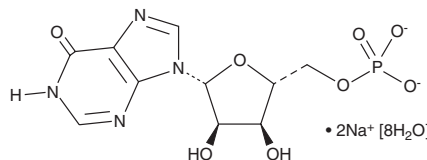
PRODUCT INFORMATION



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: $C_{10}H_{11}N_4O_8P \cdot 2Na [8H_2O]$
FW: 536.3
Purity: $\geq 95\%$
Stability: ≥ 2 years at $-20^\circ C$
Supplied as: A crystalline solid
UV/Vis.: λ_{max} : 249 nm



Laboratory Procedures

For long term storage, we suggest that inosine-5'-monophosphate (IMP) (sodium salt hydrate) be stored as supplied at $-20^\circ C$. It should be stable for at least two years.

IMP (sodium salt hydrate) is supplied as a crystalline solid. IMP (sodium salt hydrate) 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 IMP (sodium salt hydrate) be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of IMP (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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