

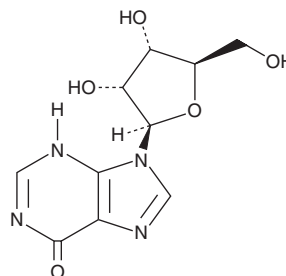
# PRODUCT INFORMATION



## Inosine

Item No. 34373

CAS Registry No.: 58-63-9  
Synonyms: 9-β-D-Ribofuranosylhypoxanthine, NSC 20262  
MF:  $C_{10}H_{12}N_4O_5$   
FW: 268.2  
Purity: ≥98%  
UV/Vis.:  $\lambda_{max}$ : 248 nm  
Supplied as: A 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 is supplied as a solid. A stock solution may be made by dissolving the inosine in water. The solubility of inosine in water is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Inosine is a purine nucleoside composed of hypoxanthine (Item No. 22254) and ribose.<sup>1</sup> It is formed from inosine-5'-monophosphate (Item No. 18135) by 5'-nucleotidase.<sup>2</sup> Inosine can also be formed by the deamination of adenosine, a post-translational modification known as A-to-I editing that occurs in tRNA and mRNA and is catalyzed by adenosine deaminase acting on RNA (ADAR).<sup>1</sup> It inhibits the production of TNF-α, IL-1, and IL-12 in LPS-stimulated isolated mouse peritoneal macrophages when used at concentrations ranging from 30 to 1,000 μM.<sup>3</sup> Inosine reduces sensorimotor impairments in a rat model of cerebral ischemia induced by middle cerebral artery occlusion (MCAO) when administered as a continuous infusion into the cisterna magna via osmotic minipump.<sup>4</sup>

### References

1. Srinivansan, S., Torres, A.G., and de Puplicana, L.R. Inosine in biology and disease. *Genes (Basel)* **12**(4), 600 (2021).
2. Haskó, G., Sitkovsky, M.V., and Szabó, C. Immunomodulatory and neuroprotective effects of inosine. *Trends Pharmacol. Sci.* **25**(3), 152-157 (2004).
3. Haskó, G., Kuhel, D.G., Németh, Z.H., et al. Inosine inhibits inflammatory cytokine production by a posttranscriptional mechanism and protects against endotoxin-induced shock. *J. Immunol.* **164**(2), 1013-1019 (2000).
4. Chen, P., Goldberg, D.E., Kolb, B., et al. Inosine induces axonal rewiring and improves behavioral outcome after stroke. *Proc. Natl. Acad. Sci. USA* **99**(13), 9031-9036 (2002).

#### 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

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