

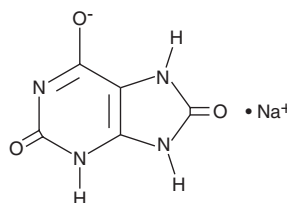
PRODUCT INFORMATION



Uric Acid (sodium salt)

Item No. 16219

CAS Registry No.: 1198-77-2
Formal Name: 7,9-dihydro-1H-purine-2,6,8(3H)-trione, monosodium salt
MF: $C_5H_3N_4O_3 \cdot Na$
FW: 191.1
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

Uric acid (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the uric acid (sodium salt) in the solvent of choice. Uric acid (sodium salt) is soluble at 25 mg/ml in 1 M NaOH. We do not recommend storing the aqueous solution for more than one day.

Description

Uric acid is a ubiquitous end product of purine metabolism in humans that is mainly excreted in urine, whereas in other mammals it is further metabolized to allantoin by uricase.¹ The final two steps in its production are catalyzed by xanthine oxidase, which generates superoxide.² Uric acid acts as a potent peroxynitrite scavenger and antioxidant.¹⁻³ However, high levels of serum uric acid ($>120 \mu\text{g/ml}$), termed hyperuricemia, are associated with gout, kidney stones, metabolic syndrome, hypertension, renal disease, and cardiovascular disease.^{1,4-7} Uric acid in the form of monosodium urate crystals has been proposed to trigger interleukin-1 β -mediated inflammation by activating the NOD-like receptor protein 3 inflammasome.⁸

References

1. Ilvarez-Lario, B. and Macarrón-Vicente, J. Is there anything good in uric acid? *Q. J. Med.* **104**(12), 1015-1024 (2011).
2. Glantzounis, G.K., Tsimoyiannis, E.C., Kappas, A.M., *et al.* Uric acid and oxidative stress. *Curr. Pharm. Des.* **11**(32), 4145-4151 (2005).
3. Hooper, D.C., Spitsin, S., Kean, R.B., *et al.* Uric acid, a natural scavenger of peroxynitrite, in experimental allergic encephalomyelitis and multiple sclerosis. *Proc. Natl. Acad. Sci. USA* **95**, 675-680 (1998).
4. Watanabe, S., Kang, D.-H., Feng, L., *et al.* Uric acid, hominoid evolution, and the pathogenesis of salt-sensitivity. *Hypertension* **40**, 355-360 (2002).
5. Dehghan, A., van Hoek, M., Sijbrands, E.J.G., *et al.* High serum uric acid as a novel risk factor for type 2 diabetes. *Diabetes Care* **31**(2), 361-362 (2008).
6. Heinig, M. and Johnson, R.J. Role of uric acid in hypertension, renal disease, and metabolic syndrome. *Cleve. Clin. J. Med.* **73**(12), 1059-1064 (2006).
7. Nakagawa, T., Hu, H., Zharikov, S., *et al.* A causal role for uric acid in fructose-induced metabolic syndrome. *Am. J. Physiol. Renal Physiol.* **290**, F625-F631 (2006).
8. Ghaemi-Oskouie, F. and Shi, Y. The role of uric acid as an endogenous danger signal in immunity and inflammation. *Curr. Rheumatol. Rep.* **13**(2), 160-166 (2011).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/10/2023

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