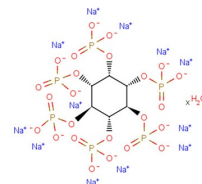


Phytic acid dodecasodium salt hydrate

Chemical Properties

CAS No.:	123408-98-0
Formula:	C ₆ H ₁₈ O ₂₄ P ₆ .XH ₂ O.12Na
Molecular Weight:	N/A
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Phytic acid dodecasodium salt hydrate is a phosphorus storage compound of seeds and cereal grains. Phytic acid dodecasodium salt hydrate inhibits the enzymatic superoxide source xanthine oxidase (XO) and has antioxidative, neuroprotective, anti-inflammatory effects. Phytic acid dodecasodium salt hydrate is known as a food inhibitor, which has a strong ability to chelate multivalent metal ions, specially zinc, calcium, iron, and as with protein residue.
Targets(IC ₅₀)	Xanthine oxidase: None
In vitro	Phytic acid dodecasodium salt hydrate inhibits the formation of uric acid from xanthine (IC ₅₀ : 30 mM). The generation of the superoxide is greatly affected by Phytic acid dodecasodium salt hydrate (IC ₅₀ : 6 mM). It also indicates that the superoxide generating domain of XO is more sensitive to phytic acid [3].

Solubility Information

Solubility	H ₂ O: 250 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Zhou JR, et al. Phytic acid in health and disease. Crit Rev Food Sci Nutr. 1995 Nov;35(6):495-508.
2. Gupta RK, et al. Reduction of phytic acid and enhancement of bioavailable micronutrients in food grains. J Food Sci Technol. 2015 Feb;52(2):676-84.
3. Muraoka S, et al. Inhibition of xanthine oxidase by phytic acid and its antioxidative action. Life Sci. 2004 Feb 13;74(13):1691-700.
4. Lv Y, et al. Phytic acid attenuates inflammatory responses and the levels of NF-κB and p-ERK in MPTP-induced Parkinson's disease model of mice. Neurosci Lett. 2015 Jun 15;597:132-6.

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