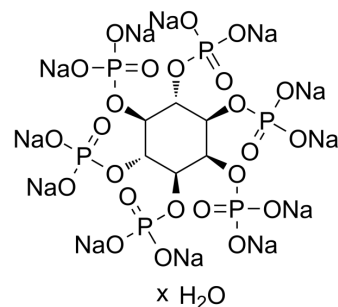


Phytic acid dodecasodium hydrate

Cat. No.:	HY-N0814A
CAS No.:	123408-98-0
Molecular Formula:	$C_6H_6O_{24}P_6 \cdot H_2O \cdot 12Na$
Target:	Xanthine Oxidase; Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : ≥ 250 mg/mL * "≥" means soluble, but saturation unknown.
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (Infinity mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	Phytic acid (Inositol hexaphosphate) dodecasodium hydrate is a phosphorus storage compound of seeds and cereal grains. Phytic acid dodecasodium 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. Phytic acid dodecasodium hydrate inhibits the enzymatic superoxide source xanthine oxidase (XO), and has antioxidative, neuroprotective, anti-inflammatory effects ^{[1][2][3][4]} .
IC₅₀ & Target	Xanthine oxidase ^[3]
In Vitro	Phytic acid dodecasodium hydrate (myo-Inositol) inhibits the formation of uric acid from xanthine with an IC ₅₀ of about 30 mM. The generation of the superoxide is greatly affected by Phytic acid dodecasodium salt hydrate; the IC ₅₀ is about 6 mM, indicating that the superoxide generating domain of XO is more sensitive to phytic acid ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [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.

Caution: Product has not been fully validated for medical applications. For research use only.

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