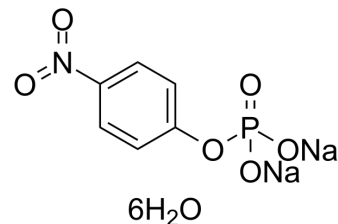


4-Nitrophenyl phosphate disodium hexahydrate

Cat. No.:	HY-116022A
CAS No.:	333338-18-4
Molecular Formula:	C ₆ H ₁₆ NNa ₂ O ₁₂ P
Molecular Weight:	371.14
Target:	Biochemical Assay Reagents
Pathway:	Others
Storage:	-20°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

H₂O : 100 mg/mL (269.44 mM; Need ultrasonic)
DMSO : 10 mg/mL (26.94 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		Concentration	1 mg	5 mg	10 mg
	1 mM		2.6944 mL	13.4720 mL	26.9440 mL
	5 mM		0.5389 mL	2.6944 mL	5.3888 mL
	10 mM		0.2694 mL	1.3472 mL	2.6944 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

4-Nitrophenyl phosphate (p-nitrophenyl phosphate) disodium hexahydrate is widely used as a small molecule phosphotyrosine-like substrate in activity assays for protein tyrosine phosphatases. 4-Nitrophenyl phosphate disodium hexahydrate is a colorless substrate that upon hydrolysis is converted to a yellow 4-nitrophenolate ion that can be monitored by absorbance at 405 nm^[1].

In Vitro

4-Nitrophenyl phosphate (PNPP) disodium hexahydrate is a commonly used substrate for alkaline phosphatases (ALPs). 4-Nitrophenyl phosphate disodium hexahydrate is hydrolyzed by ALP to PNP (p-nitrophenol), which quenches the fluorescence of novel gold nanoclusters (AuNCs) by the inner filter effect (IFE)^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Mol Sci. 2022 Feb 26;23(5):2604.

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- J Chromatogr A. 2023 Nov 17, 464511.

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REFERENCES

- [1]. Lountos GT, et al. Structural analysis of human dual-specificity phosphatase 22 complexed with a phosphotyrosine-like substrate. Acta Crystallogr F Struct Biol Commun. 2015;71(Pt 2):199-205.
- [2]. Qi S, et al. Development of a facile and sensitive method for detecting alkaline phosphatase activity in serum with fluorescent gold nanoclusters based on the inner filter effect. Analyst. 2020;145(11):3871-3877.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA