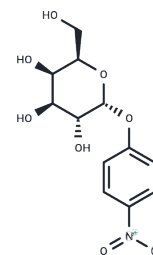


4-Nitrophenyl α -D-galactopyranoside

Chemical Properties

CAS No. :	7493-95-0
Formula:	C ₁₂ H ₁₅ NO ₈
Molecular Weight:	301.25
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	4-Nitrophenyl α -D-galactopyranoside (PNP- α -D-Gal) is an artificial substrate of 4-nitrophenyl (pNP) glycopyranoside used for detecting α -galactosidase activity. The amount of released pNP increases significantly when PNP- α -D-Gal is used as a substrate.
Targets(IC50)	Others
In vitro	Using 4-nitrophenol (pNP)-glycopyranosides as pseudosubstrates, the amount of liberated pNP from the 4-Nitrophenyl α -D-galactopyranoside is significantly higher than that from the other pNP-glycopyranosides at pH 4.0 while no activity was detected at pH 7.0. The digestion assays using pNP glycopyranosides as artificial substrates exhibit that yielding liberated galactose residues from 4-Nitrophenyl α -D-galactopyranoside mainly at pH 4.0, i.e. the pH level where yield threshold is decreased at most.

Solubility Information

Solubility	DMSO: 50 mg/mL (165.98 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3195 mL	16.5975 mL	33.195 mL
5 mM	0.6639 mL	3.3195 mL	6.639 mL
10 mM	0.332 mL	1.6598 mL	3.3195 mL
50 mM	0.0664 mL	0.332 mL	0.6639 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Okamoto-Nakazato A. Implications of the galactosidase activity of yieldin in the regulatory mechanism of yield threshold that is fundamental to cell wall extension. *Physiol Plant*. 2018 Jun;163(2):259-266.

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