4-Nitrophenyl β-D-glucopyranoside

Cat. No.: HY-15927

CAS No.: 2492-87-7

Molecular Formula: $C_{12}H_{15}NO_8$

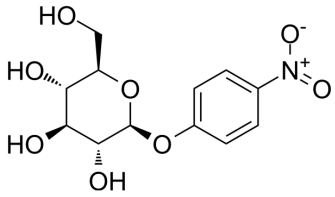
Molecular Weight: 301.25

Target: Biochemical Assay Reagents

Pathway: Others

Storage: -20°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 48 mg/mL (159.34 mM)

H_2O : 10 mg/mL (33.20 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3195 mL	16.5975 mL	33.1950 mL
	5 mM	0.6639 mL	3.3195 mL	6.6390 mL
	10 mM	0.3320 mL	1.6598 mL	3.3195 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 25 mg/mL (82.99 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.90 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

4-Nitrophenyl β-D-glucopyranoside is a chromogenic substrate for β-glucosidase. 4-Nitrophenyl β-D-glucopyranoside can be used to measure of β-glucosidase activity[1].

CUSTOMER VALIDATION

- GCB Bioenergy. 2023 Mar 18.

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REFERENCES

[1]. Alhifthi A, et al. Unimolecular, Bimolecular, and Intramolecular Hydrolysis Mechanisms of 4-Nitrophenyl β-d-Glucopyranoside. J Org Chem. 2021 Jul 16;86(14):9530-9539.

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