# 4-Nitrophenyl a-D-glucopyranoside

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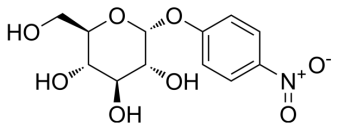
| **Cat. No.:** | HY-W011411 |
| **CAS No.:** | 3767-28-0 |
| **Molecular Formula:** | $C_{12}H_{15}NO_8$ |
| **Molecular Weight:** | 301.25 |
| **Target:** | Glucosidase |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 50 mg/mL (165.98 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / 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: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

4-Nitrophenyl a-D-glucopyranoside is a chromogenic substrate for α-glucosidase. 4-Nitrophenyl a-D-glucopyranoside can be used to measure of α-glucosidase activity[1][2].

**In Vitro**

4-Nitrophenyl a-D-glucopyranoside releases p-nitrophenol by enzymatic cleavage. p-nitrophenol can be quantified by colorimetric detection at 405 nm[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Zeng L, et, al. Inhibitory mechanism of morin on α-glucosidase and its anti-glycation properties. Food Funct. 2016 Sep 14;7(9):3953-63.

[2]. Binder TP, et, al. p-Nitrophenyl alpha-D-glucopyranoside, a new substrate for glucansucrases. Carbohydr Res. 1983 Dec 23;124(2):287-99.



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