

# 4-Methylumbelliferyl β-D-galactopyranoside

Cat. No.: HY-137845 CAS No.: 6160-78-7 Molecular Formula:  $C_{16}H_{18}O_{8}$ Molecular Weight: 338.31

Target: Fluorescent Dye

Pathway: Others

Storage: -20°C, protect from light

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

**Product** Data Sheet

# **SOLVENT & SOLUBILITY**

In Vitro

DMSO: 41.67 mg/mL (123.17 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	2.9559 mL	14.7793 mL	29.5587 mL
	5 mM	0.5912 mL	2.9559 mL	5.9117 mL
	10 mM	0.2956 mL	1.4779 mL	2.9559 mL

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

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
  - Solubility: ≥ 2.08 mg/mL (6.15 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (6.15 mM); Clear solution

## **BIOLOGICAL ACTIVITY**

Description

4-Methylumbelliferyl β-D-galactopyranoside is a fluorescent substrate for β-galactosidase which, when cleaved, produces a water-soluble blue fluorescent coumarin fluorophore that can be detected using a fluoroenzymeter or fluorometer<sup>[1]</sup>.

## **REFERENCES**

[1]. Berg JD, et al. Rapid detection of total and fecal coliforms in water by enzymatic hydrolysis of 4-methylumbelliferone-beta-D-galactoside. Appl Environ Microbiol. 1988 Aug;54(8):2118-22.

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$ 

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