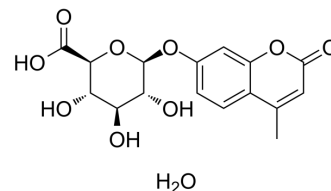


4-Methylumbelliferyl-β-D-glucuronide hydrate

Cat. No.:	HY-D0935A
CAS No.:	881005-91-0
Molecular Formula:	C ₁₆ H ₁₈ O ₁₀
Molecular Weight:	370.31
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 150 mg/mL (405.07 mM; Need ultrasonic)
H₂O : 5.2 mg/mL (14.04 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		2.7004 mL	13.5022 mL	27.0044 mL
	5 mM		0.5401 mL	2.7004 mL	5.4009 mL
	10 mM		0.2700 mL	1.3502 mL	2.7004 mL

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

BIOLOGICAL ACTIVITY

Description

4-Methylumbelliferyl-β-D-glucuronide hydrate is a fluorogenic substrat (λ_{ex} =362 nm , λ_{em} =445 nm).

In Vitro

4-Methylumbelliferyl-β-D-glucuronide hydrate is a fluorogenic substrat with λ_{ex} =362 nm and λ_{em} =445 nm. The half-saturation constants, K_m , that are calculated for sewage samples are close to the K_m values calculated based on experimental plots presented previously for freshwaters^[1].

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

PROTOCOL

Kinase Assay ^[1]

GLUase activity of E. coli cells is measured. Three millilitres of 4-Methylumbelliferyl-β-D-glucuronide hydrate (MUGlu) solution (55 mg of hydrated MUGlu and 20 mL of Triton X-100 in 50 mL of sterile water) is added to each flask (final concentration:165 mg/L). The incubation temperature is 44°C. One hundred microlitres of 2 M NaOH solution is added to each 2.9-mL aliquot to obtain a pH>10 before the fluorescence measurement^[1].

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

REFERENCES

- [1]. George I, et al. Use of beta-D-galactosidase and beta-D-glucuronidase activities for quantitative detection of total and fecal coliforms in wastewater. Can J Microbiol. 2001 Jul;47(7):670-5.
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Caution: Product has not been fully validated for medical applications. For research use only.