

PRODUCT INFORMATION



4-Methylumbelliferyl-hexadecyloxy-β-D-Glucopyranoside

Item No. 43067

Formal Name: 7-(((2S,3R,4S,5S,6R)-6-((hexadecyloxy)methyl)-3,4,5-trihydroxytetrahydro-2H-pyran-2-yl)oxy)-4-methyl-2H-chromen-2-one

Synonyms: 4-Methylumbelliferyl-hexadecyloxy-β-D-Glucoside, 4-MU-hexadecyloxy-β-D-Glucopyranoside

MF: C₃₂H₅₀O₈

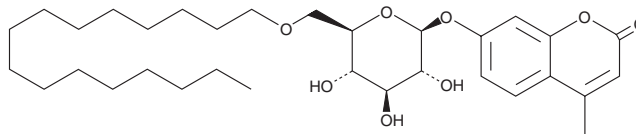
FW: 562.7

Purity: ≥98%

Supplied as: A 1 mg/ml solution in acetonitrile

Storage: -20°C

Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

4-Methylumbelliferyl-hexadecyloxy-β-D-glucopyranoside is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as chloroform purged with an inert gas can be used. 4-Methylumbelliferyl-hexadecyloxy-β-D-glucopyranoside is slightly soluble (1-10 mg/ml) in chloroform.

Description

4-Methylumbelliferyl-hexadecyloxy-β-D-glucopyranoside is a fluorogenic substrate for β-glucocerebrosidase (GBA1).¹ It is selective for GBA1 over GBA2 and GBA3. Hydrolysis of 4-methylumbelliferyl-hexadecyloxy-β-D-glucopyranoside by GBA1 releases the fluorescent moiety 4-MU, which displays an emission maximum between 445-454 nm and a pH-dependent excitation maximum of 330, 370, and 385 nm at pH 4.6, 7.4, and 10.4, respectively.^{1,2} 4-Methylumbelliferyl-hexadecyloxy-β-D-glucopyranoside has been used to detect GBA1 activity in spleen lysates isolated from patients with Gaucher disease.¹

References

1. Bannink, S., Bila, K.O., van Weperen, J., et al. 6-O-alkyl 4-methylumbelliferyl-β-D-glucosides as selective substrates for GBA1 in the discovery of glycosylated sterols. *J. Lipid Res.* **65**(11), 100670 (2024).
2. Zhi, H., Wang, J., Wang, S., et al. Fluorescent properties of hymecromone and fluorimetric analysis of hymecromone in compound dantong capsule. *J. Spectrosc.* 147128 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/21/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM