

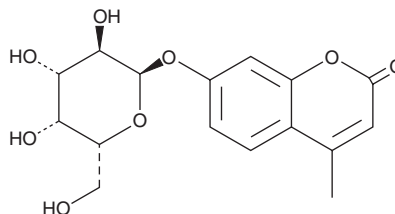
PRODUCT INFORMATION



4-Methylumbelliferyl- α -D-Galactopyranoside

Item No. 16551

CAS Registry No.: 38597-12-5
Formal Name: 7-(α -D-galactopyranosyloxy)-4-methyl-2H-1-benzopyran-2-one
Synonyms: 4-Methylumbelliferyl α -D-galactoside, MU- α -Gal, 4-MU- α -Gal
MF: C₁₆H₁₈O₈
FW: 338.3
Purity: \geq 98%
UV/Vis.: λ_{max} : 213, 316 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

4-Methylumbelliferyl- α -D-galactopyranoside (4-MU- α -Gal) is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-MU- α -Gal in the solvent of choice, which should be purged with an inert gas. 4-MU- α -Gal is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 4-MU- α -Gal in these solvents is approximately 1 and 5 mg/ml, respectively.

Description

4-MU- α -Gal is a fluorogenic substrate of α -galactosidase.^{1,2} In addition to its use in characterizing novel α -galactosidases, 4-MU- α -Gal is used in assays to evaluate deficiency in α -galactosidase activity related to Fabry disease.³ Hydrolysis of 4-MU- α -Gal releases the fluorescent product 4-MU, which has an emission maximum at 445-454 nm. The excitation maximum for 4-MU is pH-dependent: 330, 370, and 385 nm at pH 4.6, 7.4, and 10.4, respectively.⁴

References

1. Mayes, J.S., Scheerer, J.B., Sifers, R.N., *et al.* Differential assay for lysosomal alpha-galactosidases in human tissues and its application to Fabry's disease. *Clin. Chim. Acta* **112**(2), 248-251 (1981).
2. Oh, J.-K., Lee, J.-Y., Park, H.-K., *et al.* α -Galactosidase activity in human saliva. *Arch. Oral Biol.* **53**(9), 842-848 (2008).
3. Sista, R.S., Wang, T., Wu, N., *et al.* Multiplex newborn screening for Pompe, Fabry, Hunter, Gaucher, and Hurler diseases using a digital microfluidic platform. *Clin. Chim. Acta.* **424**, 12-18 (2013).
4. Zhi, H., Wang, J., Wang, S., *et al.* Fluorescent properties of hymecromone and fluorimetric analysis of hymecromone in compound dantong capsule. *J. Spectrosc.* 1-9 (2014).

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.

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