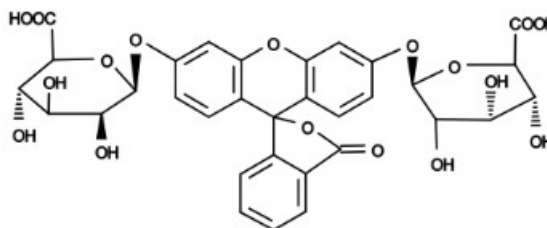


FDGlcU

Beta-glucuronidase (GUS) substrate that is non-fluorescent until enzymatic hydrolysis. Useful as a reporter gene marker, detection of E.coli, and as a lysosomal marker.

Product Information

Name :	FDGlcU Fluorescein di-beta-D-glucuronide
Catalog Number :	FP-663031, 5 mg
Structure :	C ₃₂ H ₂₈ O ₁₇
Molecular Weight :	MW= 684.55
Soluble:	DMSO
Absorption / Emission :	$\lambda_{exc}/\lambda_{em} = 498 / 517$ nm



Storage: Store at -20°C (K). Protect from light and moisture (Stable 12 months)

Introduction

The beta-glucuronidase (GUS) enzyme from *E. coli* (EC 3.2.1.31) has been well documented to provide desirable characteristics as a marker gene in transformed plants. The GUS reporter gene system has many advantages including stable expression of *E. coli* GUS enzyme, no interference with normal plant metabolism, and low intrinsic GUS activity in higher plants. FDGlcU is considered to be one of the most sensitive fluorogenic substrates available for detecting beta-glucuronidase. The colorless and nonfluorescent FDGlcU is hydrolyzed to highly fluorescent fluorescein, which exhibits excellent spectral properties that match the optimal detection window of most fluorescence instruments. Glucuronidase-catalyzed hydrolysis of FDGlcU can be followed by fluorescence increase around 520 nm. Alternatively, FDGlcU can also be used to detect glucuronidase in a chromogenic mode since the enzymatic product (fluorescein) exhibits a large extinction coefficient (close to 100,000 cm⁻¹mol⁻¹). FDGlcU has been used for identifying GUS-positive cells with fluorescence microscopy and flow cytometry.

References

- **Cheng KW *et al.***, Inhibition of gut microbial β -glucuronidase effectively prevents carcinogen-induced microbial dysbiosis and intestinal tumorigenesis, *Pharmacological Research*, 177, 106115 (2022)
- **Meng J. *et al.***, Opioid-induced microbial dysbiosis disrupts irinotecan (CPT-11) metabolism and increases gastrointestinal toxicity in a murine model, *BJP* 180:10, p. 1362-1378 (2023)

Related Products

- pNPG, 775600
- C12FDGlcU, FP-814431

Ordering information

Catalog size quantities and prices may be found at <http://www.fluoprobes.com>. Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes / Interchim; Hotline : +33(0)4 70 03 73 06

FT-663031

Disclaimer : Materials from FluoProbes® are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. FluoProbes® is not liable for any damage resulting from handling or contact with this product.