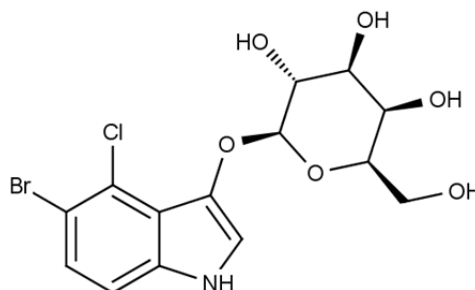




X-Gal

Catalog No:	02249
Lot No:	XXXXX
Cas No:	7240-90-6
Formula:	C ₁₄ H ₁₅ BrClNO ₆
MW:	408.61
Supplied as:	solid
Stability:	store at -20 °C, dry, protect from light



Background

X-Gal (also abbreviated BCIG for 5-bromo-4-chloro-3-indolyl- β -D-galactopyranoside) is an organic compound consisting of galactose linked to a substituted indole. X-Gal is an analog of lactose, and therefore may be hydrolyzed by the β -galactosidase enzyme which cleaves the β -glycosidic bond in D-lactose. X-Gal, when cleaved by β -galactosidase, yields galactose and 5-bromo-4-chloro-3-hydroxyindole. The latter then spontaneously dimerizes and is oxidized into 5,5'-dibromo-4,4'-dichloro-indigo, an intensely blue product which is insoluble. X-Gal itself is colorless, the presence of blue-colored product therefore may be used as a test for the presence of an active β -galactosidase. This easy identification of an active enzyme allows the gene for β -galactosidase (the lacZ gene) to be used as a reporter gene in various applications.

Tests

Appearance:
Purity (HPLC):
Solubility (2%, DMF):
Identity by I.R.:
Mass spec:
Blue-white assay

Specifications

white, crystalline powder
 $\geq 98\%$
colorless, clear, complete
conforms to structure
M-H⁺: 408.5

pale blue center/ dense blue periphery
faint blue center/ white periphery

LacZ⁺

LacZ⁻

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.