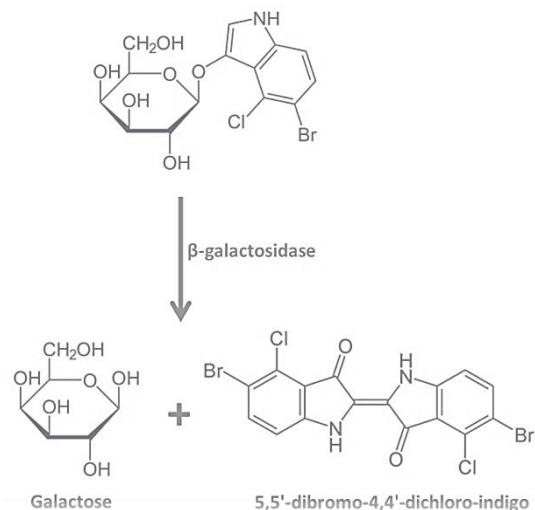


X-Gal

XGAL-001-001

Introduction

X-Gal (5-bromo-4-chloro-3-indolyl- β -D-galactopyranoside) is a chromogenic substrate for β -galactosidase. β -Galactosidase cleaves the substrate and releases colorless galactose and 5-Bromo-4-chloro-3-indoxyl (X). The indoxyl will be oxidized to the insoluble 5,5'-dibromo-4,4'-dichloro-indigo, forming an intense blue precipitate.



Application

X-Gal, in conjunction with IPTG, is used to detect β -galactosidase activity to differentiate recombinants from nonrecombinants in cloning experiments using vectors containing the lacZ or lacZ α -peptide gene.

Storage condition

Upon receipt and for long-term use, store the powder in a tightly closed and desiccated container at -20°C. X-Gal is stable for at least 2 years at -20°C if stored properly. *

*Preparation of a 20 mg/mL stock solution in 100% dimethylformamide (DMF). Store the stock solution at -20°C in the dark. Discard the stock solution if the color changes significantly.

Technical specifications

- ✓ CAS Number: 7240-90-6
- ✓ Chemical Formula: C₁₄H₁₅BrCINO₆
- ✓ Molecular Weight: 408.63
- ✓ Assay (HPLC) > 98% w/w
- ✓ Purity (HPLC): > 99%
- ✓ Purity (TLC): single spot
- ✓ Water content (Karl Fischer): <1%
- ✓ Identity (IR): conforms to structure
- ✓ Solubility (5% w/v, DMF): soluble