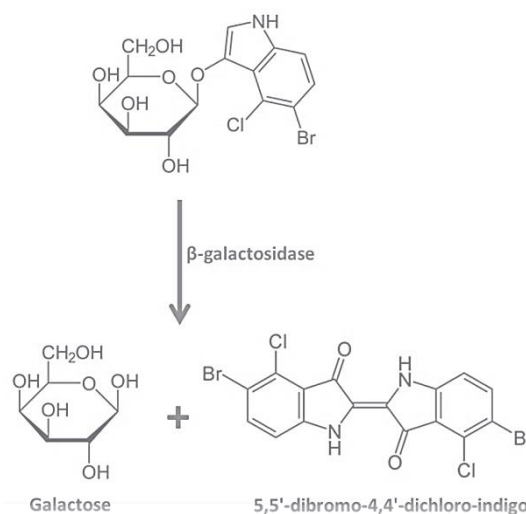


X-Gal

XGAL-001-001

Introduction

X-Gal (5-bromo-4-chloro-3-indolyl- β -D-galactopyranoside) is a chromogenic substrate for beta-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 | ✓ Water content (Karl Fischer): <1% |
| ✓ Chemical Formula: $\text{C}_{14}\text{H}_{15}\text{BrClNO}_6$ | ✓ Identity (IR): conforms to structure |
| ✓ Molecular Weight: 408.63 | ✓ Solubility (5% w/v, DMF): soluble |
| ✓ Assay (HPLC) > 98% w/w | |
| ✓ Purity (HPLC): > 99% | |
| ✓ Purity (TLC): single spot | |