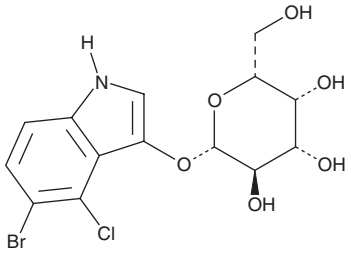
PRODUCT INFORMATION

X-Gal

Item No. 16495

CAS Registry No.:	7240-90-6
Formal Name:	5-bromo-4-chloro-1H-indol-3-yl-β-D-galactopyranoside
Synonyms:	BCIG, X-β-Gal, 5-bromo-4-chloro-3-indolyl-β-D-Galactopyranoside
MF:	$C_{14}H_{15}BrClNO_6$
FW:	408.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 233, 292 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

X-gal is supplied as a crystalline solid. A stock solution may be made by dissolving the X-gal in the solvent of choice, which should be purged with an inert gas. X-gal is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of X-gal in these solvents is approximately 30 mg/ml.

X-gal is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, X-gal should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. X-gal has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

X-Gal is a chromogenic substrate for β-galactosidase.[1] Upon cleavage by β-galactosidase, a blue pigment is released that can be used as a marker of β-galactosidase activity. X-Gal has been used for the detection of lacZ activity in reporter assays and in the determination of protein-protein interactions.[2,3]

Reference

1. Burn, S.F. Detection of β-galactosidase activity: X-gal staining. *Methods Mol. Biol.* **886**, 241-250 (2012).
2. Bout, A., Valerio, D., and Scholte, B.J. In vivo transfer and expression of the lacZ gene in the mouse lung. *Exp. Lung Res.* **19(2)**, 193-202 (1993).
3. Möckli, N. and Auerbach, D. Quantitative β-galactosidase assay suitable for high-throughput applications in the yeast two-hybrid system. *Biotechniques* **36(5)**, 872-876 (2004).

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