

X-Gal

#GAB02.0001 | GAB02.0005
 (for research only)

Product:	X-gal (5-Bromo-4-chloro-3-indolyl-β-D-galactopyranoside) is a synthetic analog of lactose that mimics lactose as an inert chromogenic substrate for β-galactosidase. In combination with, IPTG (needed for the induction of the expression of β-galactosidase), X-Gal can be used for blue/white screening of the lac phenotype of <i>E.coli</i> in cloning experiments and discriminate between bacterial colonies transformed with recombinant plasmid containing the DNA fragment of interest (white) versus non-recombinant plasmid (blue), as β-galactosidase hydrolyzes X-Gal into galactose and a blue precipitate.
Quantity:	#GAB02.0001: 1g X-gal #GAB02.0005: 5g X-gal
Appearance:	White powder.
Storage:	2°C – 8°C for at least 1 years, at -20°C at least 3 years
Preparation:	Prepare a stock solution of 20mg/ml in DMF (N,N-dimethylformamide) or DMSO (dimethylsulfoxide) and store in glass containers at -20°C for 6-12 months. There is no need for sterilization. If the solution becomes pinkish, it should be discarded.
Usage:	For incorporation in agar plates, add 5 ml of X-Gal stock solution (together with IPTG (e.g. 0,5ml of a 1M stock solution) and appropriate antibiotics) to 1 liter of autoclaved media agar, just prior to pouring the plates. Medium temperature should be below 55°C. Alternatively, in order to minimize the required amount of X-Gal, X-Gal can be applied directly on top of prepared plates: add 40 µl of the X-Gal stock solution (and 8 µl of a 100mg/ml IPTG solution, if not already present in the medium) and spread the solution over the entire surface of the plate. Ensure that the whole area is covered to prevent false positives. Allow the solution to be absorbed by incubation of the plates for 1-2 hours at 37°C before proceeding with cell plating.

Specifications:

 Formula: C₁₄H₁₅BrClNO₆

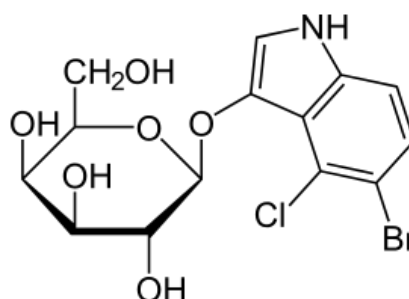
MW: 408,6 g/mol

Purity: >99% (HPLC, on dry basis)

Purity: single spot (TLC)

Water content: <1% (Karl Fischer)

Solubility: DMF or DMSO (see preparation)



ORDERING INFORMATION – Molecular Cloning – Common Reagents

Reference #	Product Name	Quantity
GAB01.0005	IPTG (max 5 ppm dioxane)	5 g
GAB02.0001 GAB02.0005	X-Gal	1 g 5 g
GAB03.0005	Ampicillin (sodium salt)	5 g
GAB04.0005	Kanamycin (sulphate)	5 g
GAB05.0005	Chloramphenicol	5 g
GAB06.0005	Carbenicillin (disodium salt)	5 g
GAB07.0005	Tetracycline (hydrochloride)	5 g
GAB08.0005	Gentamycin powder	5 g

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