


IPTG

(Isopropyl-beta-D-thiogalactoside)

Catalog Number AM9462, AM9464

Pub. No. 4386632 Rev. C

Cat. no.	Quantity	Storage conditions
AM9462	2 g	Store at 0–4°C.
AM9464	5 g	Protect from light and humidity.

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from www.lifetechnologies.com/support.

Product description

IPTG (isopropyl-β-D-thiogalactoside, isopropyl-β-D-thiogalactopyranoside) is a non-metabolizable analog of galactose that is used to induce expression of genes under control of the *E. coli lac* operon. It is commonly used in conjunction with X-Gal (Cat. no. AM9944) to screen for recombinant plasmids and phage, when using vectors that support alpha complementation of β-galactosidase. Ambion® IPTG is ultra-pure and dioxane-free.

Appearance: White crystalline powder

Molecular weight: 238.31

Molecular formula: C₉H₁₈O₅S

Purity: >99%

Guidelines for use

IPTG is typically prepared as 0.1–0.84 M (23.8–200 mg/mL) stock solutions in water. IPTG solutions may be sterilized by passing the solution through a 0.2-μm disposable filter. Store aliquots at –20°C and thaw a maximum of 3–4 times.

IPTG is commonly used at a final concentration of ~0.5 mM in agar plates and overlays, but its useful concentration varies from 0.1–2 mM, depending on the application.

- Plate or top agar: Add IPTG immediately before pouring. For 3 mL of top agar, add 7 μL of 0.84 M (20% w/v) IPTG to yield a final concentration of ~2 mM.
- Previously poured plates: Spread 100 μL of a 0.1 M stock solution onto a 100-mm plate. Allow it to dry before use.

IPTG is also used in the overexpression of proteins. The recommended concentration for this application is 0.1–0.4 mM and will vary with the vector and strain of bacteria.

Limited product warranty

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