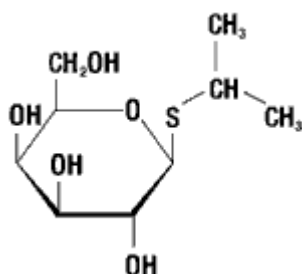


IPTG

(isopropyl-beta-D-thiogalactopyranoside)

Formula: C₉H₁₈O₅S

Molecular Weight: 238.3



Store: Store at -20°C

Code No.: ZB079

Package: 500g

Price: EUR(€)1500.00

Description

IPTG (isopropyl-beta-D-thiogalactopyranoside) is a highly stable synthetic analog of lactose. It inactivates the *lac* repressor and induces synthesis of beta-galactosidase, an enzyme that promotes lactose utilization. The IPTG is used to induce the expression of cloned genes which are under control of the *lac* operon. It is used in conjunction with X-Gal to determine the *lac* phenotype in blue/white colony screening.

Applications

- Blue/white colony screening, *see* Protocol for the Blue/White Colony Screening.
- Induces the expression of cloned genes that are under control of the *lac* promoter.

Quality Control

Dioxane-free.

Greater than 99% purity confirmed by HPLC.

Functionally tested in blue/white colony screening.

Note

- Preparation of a 23.83 mg/ml (100 mM) stock solution of IPTG in water is recommended.
- For blue/white screening, 0.1 mM final IPTG concentration in LB (Luria Broth) media is

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recommended.

Protocol for the Blue/White Colony Screening

For individual LB (Luria Broth) agar plates:

1. Pour sterile warm LB agar (about 25 ml) into a Petri dish.
2. Dry opened LB plates at room temperature under UV light for about 30 min.
3. Add 40 μ l of the X-Gal Solution (20 mg/ml), ready-to-use.
4. Add 40 μ l of 100 mM IPTG Solution, ready-to-use.
5. Spread evenly on the plate with a sterile spatula.

For batch use, add the following directly per 1 ml of the liquid LB agar (kept at about 50°C):

1. 1 μ l of X-Gal Solution (20 mg/ml), ready-to-use.
2. 1 μ l of 100 mM IPTG Solution, ready-to-use.
3. Mix well.
4. Pour 25 ml of prepared LB agar into each Petri dish.
5. Dry opened LB plates at room temperature under UV light for about 30 min.



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