

IPTG (Dioxane-Free)

Shipping: On Dry/Blue Ice Catalog numbers

Exp. Date: See vial BIO-37036 : 5g

Batch No.: See vial



A Meridian Life Science® Company

Store at -20°C

Storage and stability: IPTG is shipped on Dry/Blue Ice. It should be stored at -20°C upon receipt. Excessive freeze/thawing is not recommended. Store protected from light. When stored under optimum conditions, it is stable for up to 24 months from date of purchase.

Safety precautions: Harmful if swallowed. Irritating to eyes and skin. Please refer to the material safety data sheet for further information and safety handling practice.

Xi: IRRITANT

Notes:

For Research Use Only

This product insert is a declaration of analysis at the time of manufacture

Description

Isopropyl-β-D-thiogalactopyranoside (IPTG) is a chemical analogue of galactose, which cannot be hydrolysed by the enzyme β-Galactosidase. Hence, it induces the *E. coli lac* operon activity by binding and inhibiting the lac repressor without being degraded. Genes controlled by the *lac* or *tac* promoter/operator sequences are expressed to high levels in the presence of IPTG.

It is recommended for blue/white screening by *lacZ* α- complementation with appropriate vectors and host strains, such as alpha-select, CH3-Blue and *BIOBlue* cells, and for protein expression with BL21 (DE3) cells and other lac promoter-derived expression systems. The ultra-pure preparation is dioxane-free and supplied as a sterile aqueous solution.

Features

- Induces *E. coli lac* operon activity
- >99.6% purity by HPLC
- Available as powder and stabilized stock solution

Applications

- Blue/white color screening
- Induction of *lac* operon for protein expression
- Genes controlled by the *lac* or *tac* promoter/operator sequences are expressed to high levels in the presence of IPTG

Characteristics

Empirical formula	C ₉ H ₁₈ O ₅ S
Molecular weight	238.3
Form	1M Solution in water
Melting point	112-113°C
Purity	≥99% by HPLC

Recommendations for use

- Dissolve to desired concentration in Water, 18.2MΩ (DNase/RNase-free).
- Filter sterilize through a 0.22 micron disposable filter.
- Store solution at -20°C.
- For blue/white screening, 0.1mM final IPTG concentration in LB (Luria Broth) media is recommended

Associated Products

Product Name	Pack Size	Catalog No.
X-GAL Powder	1g	BIO-37035
IPTG Solution	10ml	BIO-37062
Quick-Stick Ligase	50 reactions	BIO-27027
SureClean	5ml	BIO-37042
α-Select Gold Efficiency Competent Cells	1ml	BIO-85027
CH3-Blue 10 ⁹ Chemically Competent Cells	1ml	BIO-85040
BioBlue 10 ⁹ Chemically Competent Cells	1ml	BIO-85037
BL21 (DE3) Competent Cells	1ml	BIO-85032

Product Citations:

1. Ali, F.R., *et al. Meth. Mol. Biol.* **628**, 195-214 (2010).
2. Prabhakar, V., *et al. FEBS Lett.* **583(6)**, 983-991 (2009).
3. Chan, C-H., *et al. Conserv. Gen.* **9(4)**, 1067-1070 (2008).
4. Hamblin, K., *et al. Mol. Microbiol.* **68(6)**, 1395-1405 (2008).
5. Maruta, F., *et al. J. Drug Targeting* **15(4)**, 311-319 (2007).
6. Ross, P.J., *et al. Infect. Immun.* **72(3)**, 1568-1579 (2004).
7. Meng, G. & Fütterer, K. *Nat. Struct. Biol.* **10**, 935-941 (2003).

Bioline Reagents Ltd
UNITED KINGDOM

Tel: +44(0)20 8830 5300
Fax: +44 (0)20 8452 2822

Bioline USA Inc.
USA

Tel: +1 508 880 8990
Fax: +1 508 880 8993

Bioline GmbH
GERMANY

Tel: +49(0)33 7168 1229
Fax: +49 (0)337168 1244

Bioline (Aust) Pty. Ltd
AUSTRALIA

Tel: +61 (0)2 9209 4180
Fax: +61 (0)2 9209 4763