

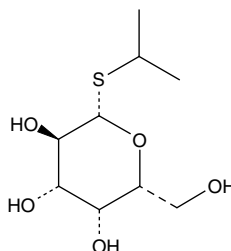
Product Information



IPTG (dioxane free)

Item No. 15300

CAS Registry No.: 367-93-1
Formal Name: 1-methylethyl 1-thio-β-D-galactopyranoside
Synonym: Isopropyl β-thiogalactoside
MF: C₉H₁₈O₅S
FW: 238.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that IPTG (dioxane free) be stored as supplied at -20°C. It should be stable for at least two years.

IPTG (dioxane free) is supplied as a crystalline solid. A stock solution may be made by dissolving the IPTG in the solvent of choice. IPTG is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of IPTG in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of IPTG can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of IPTG in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

IPTG is a molecular mimic of allolactose, a lactose metabolite that triggers transcription of the lac operon.¹ It is used in the concentration range of 100 μM - 1.5 mM to induce protein expression where the gene is under the control of the lac operator and is suitable for use with X-gal or blueo-gal to detect lac gene activity in cloning procedures.²

References

1. Kaster, K.R., Burgett, S.G., Rao, R.N., *et al.* Analysis of a bacterial hygromycin B resistance gene by transcriptional and translational fusions and by DNA sequencing. *Nucleic Acids Res.* **11(19)**, 6895-6911 (1983).
2. Sambrook, J. and Russell, D.W. Molecular cloning: A laboratory manual. 3, Cold Spring Harbor Laboratory Press, Cold Spring Harbor (2001).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/15300

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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