

## DATA SHEET

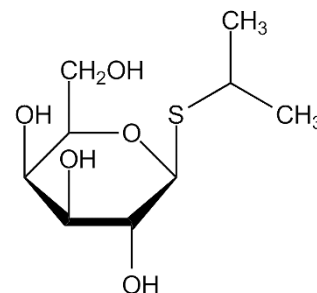
Version: 2  
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### 1. Identification

<b>Product name</b>	<b>IPTG</b> 5g (Dioxane-free)
<b>Cat. No</b>	<b>C0040</b>

### 2. Description

IPTG (Isopropyl B-D-thiogalactopyranoside), Dioxane-Free is an analogue of allolactose that binds specifically to the repressor protein of the lac operon and induces expression of  $\beta$ -galactosidase in Escherichia coli. Unlike allolactose, IPTG is not a substrate for  $\beta$ -galactosidase, as the carbon-sulfur bond cannot be cleaved by the enzyme, so its concentration remains constant. The compound is widely used with X-Gal plates to screen for blue/white selection of recombinant bacteria.



Isopropyl B-D-thiogalactopyranoside

### 3. Specifications

- **CAS Number:** 367-93-1
- **Chemical Formula:** C<sub>9</sub>H<sub>18</sub>O<sub>5</sub>S
- **Molecular Weight:** 238.30
- **Purity (HPLC)(on dry basis):** >99.0%
- **Melting point:** 110 – 114 °C
- **Identity (IR):** conforms to structure
- **Solubility:** soluble in water and methanol
- **Heavy metals (Pb):** <5ppm
- **1,4-Dioxane:** Not detected
- **pH (5% in water):** 5.0 – 7.0
- **Water content (Karl Fischer):** <1.0%

### 4. Storage specifications

#### Store at 4° C

A stock solution (0.1 M) is prepared by dissolving IPTG in water with subsequent sterile filtration of the solution. Wherever possible, you should prepare and use solutions on the same day.

**Store the solution as aliquots in tightly sealed vials at -20°C.** The final concentration of IPTG in indicator plates should be 0.2 mM.

### 5. Applications

At 1mM concentration, IPTG is used in conjunction with X-Gal or Blueo-Gal in blue-white selection of recombinant bacterial colonies that induce expression of the lac operon in Escherichia coli.

### 6. Further information

<b>Product Use</b>	This product is developed, designed and sold exclusively only for research purposes use.
<b>Limitations</b>	The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.
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