



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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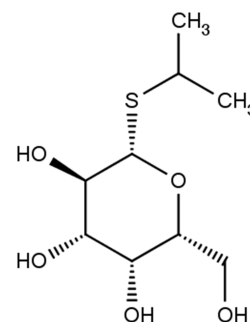
[www.szabo-scandic.com](http://www.szabo-scandic.com)

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## IPTG, ultra pure

<b>Catalog No:</b>	05684
<b>Lot No:</b>	XXXXXX
<b>Cas No:</b>	367-93-1
<b>Formula:</b>	C <sub>9</sub> H <sub>18</sub> O <sub>5</sub> S
<b>MW:</b>	238.3
<b>Supplied as:</b>	solid
<b>Stability:</b>	store at -20°C, protect from light



### Background

Isopropyl  $\beta$ -D-1-thiogalactopyranoside (IPTG) is a molecular mimic of allolactose, a lactose metabolite that triggers transcription of the lac operon, and it is therefore used to induce protein expression where the gene is under the control of the lac operator. Like allolactose, IPTG binds to the lac repressor and releases the tetrameric repressor from the lac operator in an allosteric manner, thereby allowing the transcription of genes in the lac operon, such as the gene coding for beta-galactosidase, a hydrolase enzyme that catalyzes the hydrolysis of  $\beta$ -galactosides into monosaccharides. But unlike allolactose, the sulfur (S) atom creates a chemical bond which is non-hydrolyzable by the cell, preventing the cell from metabolizing or degrading the inducer. The concentration of IPTG therefore remains constant and the expression of lac p/o-controlled genes would not be inhibited during the experiment.. In blue-white screen, IPTG is used together with X-gal. Blue-white screen allows colonies that have been transformed with the recombinant plasmid rather than a non-recombinant one to be identified in cloning experiments.

### Tests

<b>Assay (HPLC):</b>	$\geq 99\%$
<b>Solution (25°C, 5% in H<sub>2</sub>O):</b>	clear, colorless
<b>Water (K.F.):</b>	$\leq 1.0\%$
<b>Melting point:</b>	106.5 – 113.5°C
<b>pH (25°C, 5%, H<sub>2</sub>O):</b>	5.0 – 7.0
<b>Dioxane (GLC):</b>	$\leq 1$ ppm
<b>Optical Rotation (C=1, H<sub>2</sub>O):</b>	-31.0 - -33.0°
<b>Abs. (2% in H<sub>2</sub>O, 1 cm)</b>	
<b>A<sub>260</sub></b>	$\leq 0.07$
<b>A<sub>280</sub></b>	$\leq 0.050$

### Specifications

### Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.