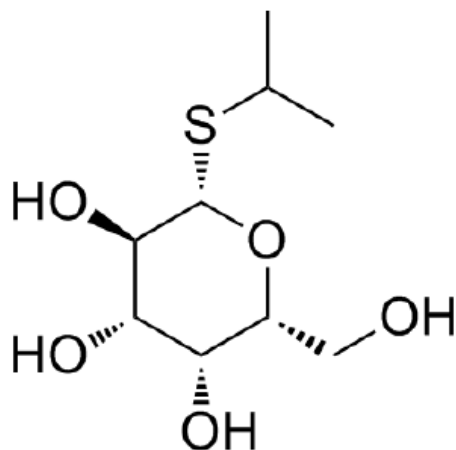


## IPTG ( $\geq 98\%$ )

Cat # NB-45-00111



### Product Information

<b>Code</b>	NB-45-00111
<b>CAS number</b>	367-93-1
<b>Molecular Formula</b>	C <sub>9</sub> H <sub>18</sub> O <sub>5</sub> S
<b>Molecular Weight</b>	238.3
<b>Storage</b>	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)
<b>Sizes</b>	5g (NB-45-00111-5g) ; 5x5g (NB-45-00111-5x5g) ; 25g (NB-45-00111-25g)
<b>Note</b>	For research use only.

## Solvent and solubility

### *In vitro* :

H<sub>2</sub>O : 100 mg/mL (419.64 mM; Need ultrasonic)

DMSO : ≥ 60 mg/mL (251.78 mM)

\* "≥" means soluble, but saturation unknown.

### Preparing Stock solutions:

Solvent	Mass		
	1 mg	5 mg	10 mg
Concentration			
1 mM	4.1964 mL	20.9820 mL	41.9639 mL
5 mM	0.8393 mL	4.1964 mL	8.3928 mL
10 mM	0.4196 mL	2.0982 mL	4.1964 mL

Please refer to the solubility information to select the appropriate solvent.

### *In vivo* :

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (8.73 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (8.73 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (8.73 mM); Clear solution

## Biological activity

### *Description* :

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.

***In Vitro :***

IPTG uptake by E. coli can be independent of the action of lactose permease, since other transport pathways are also involved. At low concentration, IPTG enters cells through lactose permease, but at high concentrations (typically used for protein induction), IPTG can enter the cells independently of lactose permease.

***For reference only***

***For Research Use Only. Not for Diagnostic or Therapeutic Use.***

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