

IPTG (Isopropyl β -D-Thiogalactopyranoside)

CAS Number: 367-93-1

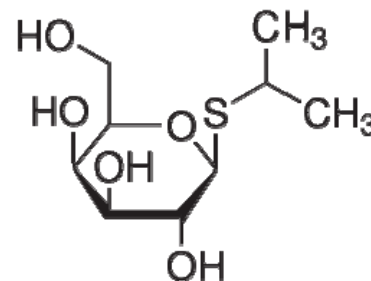
Storage Temperature: 2-8 °C

Product Description :

Appearance: White solid

Molecular Formula: C₉H₁₈O₅S

Molecular Weight: 238.30



IPTG is a non-metabolizable galactose analog that induces expression of the lac operon in *Escherichia coli*. IPTG functions by binding to the lac repressor and altering its conformation. This inactivation prevents the repression of the β -galactosidase coding lac gene. While not a substrate for β -galactosidase, it is a substrate for thiogalactoside transacetylase and has been reported to be an inducer of penicillinase activity in bacteria.

IPTG is a commonly used reagent in cloning procedures that require induction of β -galactosidase activity and is used in conjunction with X-Gal, in blue-white color selection of recombinant bacterial colonies.

Preparation Instructions:

IPTG is soluble at 250 mg/ml in water and may be sterilized by filtration through a 0.22 μ m filter. The solution may be aliquoted and stored at -20 °C. IPTG solutions can be stored at room temperature for up to one month. When preparing culture plates, aliquots of X-Gal and IPTG may be added to the agar solution after it has been cooled to ~45 °C.

Storage/Stability:

As supplied, these products should be stored at 2-8 °C and will have shelf-lives of 5 years.

Precautions and Disclaimer :

For Laboratory Use Only. Not for drug, household or other uses.