



## IPTG

An inducer for recombinant proteins overexpression

IPTG Powder, well also known as Isopropyl  $\beta$ -D-thiogalactopyranoside, it acts as an allolactose analogue which stays unmetabolized within cells. It plays a key role in the molecular biology by inducing overexpression of recombinant proteins which controlled by the lac promoter in the Escherichia coli.

When was introduced to bacterial cultures, The IPTG like binds to the lac repressor protein. Thereby blocking its inhibition for gene expressions. So, this Allowing for precise Controls over production for large quantities of the targeted protein.

Researchers widely use IPTG Powder in lab to induce protein expression. In bacterial cultures aiding in studies for protein, functions, structures, and interactions.

Cat. Number	ASC-1017
CAS Number	367-93-1
MDL Number	MFCD00063273
Pubchem	310275355
Molecular Weight	238.30 gr/mol
Molecular Formula	$C_9H_{18}O_5S$
Storage Temperature	+4 °C
Form and Color	Crystalline powder / White
Solubility	Soluble in Water and methanol
Purity (HPLC)	≥ 98%
UV Absorbance (5% in water)	300 nm: ≤ 0.15 / 400 nm: ≤ 0.06
pH (5% in water)	5 – 7
Melting Point	110 – 114 °C
Water Content	≤ 1 %
Synonym	Isopropyl-beta-D-thiogalactopyranoside, approx. 15.0% dioxane