

# EPIK Hydroxymethyl dCTP

Shipping: On Dry/Blue Ice

Catalog numbers

Batch No.: See vial

BIO-39046

1 x 250µl

Presentation: 25µmol

Store at -20°C



A Meridian Life Science® Company

## Storage and stability:

EPIK Hydroxymethyl dCTP is shipped on dry/blue ice. On arrival store at -20°C for optimum stability. Repeated freeze/thaw cycles should be avoided. For long-term storage, aliquoting is recommended.

## Expiry:

When stored under the recommended conditions and handled correctly, quality is retained until the expiry date on the outer box label.

## Safety precautions:

Please refer to the material safety data sheet for information.

## Quality control specifications:

EPIK Hydroxymethyl dCTP is extensively tested for contamination prior to release. dNTPs are >99% pure determined by HPLC and are free of DNase, RNase and nicking activity. Lithium salt, >99% deoxynucleoside triphosphates (HPLC, area %), <1% deoxynucleoside monophosphates and deoxynucleoside diphosphates.

## Notes:

Research Use Only

## Description

Hydroxymethylcytosine is a recently discovered DNA base present at detectable levels in most mammalian cell types and tissues and is important because of its potential role in regulating gene expression during development and disease pathogenesis. Bioline has developed a novel method for producing highly purified 5-hydroxymethyl-2'-dexycytidine-5'-triphosphate (Hydroxymethyl dCTP).

EPIK Hydroxymethyl dCTP is supplied as lithium salt and can be used in a number of molecular biological applications including PCR, where it is readily incorporated by both standard and proof-reading polymerases.

## Features

- >99% pure, determined by HPLC analysis
- Readily incorporated by all common DNA polymerases
- Hydroxymethylated substrates can be ligated by standard ligases
- DNase, RNase and Nickase free

## Applications

- Methylation studies
- Studies of Hydroxymethylated DNA/protein interaction
- Labelling of DNA *in vitro*
- Substitution of dCTP in a wide variety of molecular biology assays
- Structural and activity studies of the restriction/modification systems of different organisms

## EPIK Hydroxymethyl dCTP Characteristics

5-hydroxymethyl-2'-deoxycytidine-5'-triphosphate, 100mM solution containing 25µmol (250µl) of Hydroxymethyl dCTP.

SPECTRAL & HPLC ANALYSIS	PERFORMANCE
$\lambda_{max}$ pH 7.0	275nm $\pm$ 1nm
$\epsilon$ at $\lambda_{max}$ , pH 7.0	7700 M <sup>-1</sup> x cm <sup>-1</sup>
$A_{250}/A_{260}$	0.89 $\pm$ 0.03
$A_{280}/A_{260}$	1.27 $\pm$ 0.03
Concentration	100mM $\pm$ 5%
Appearance	Clear Colorless Solution
pH of Solution	7.5 - 8.0
Purity: EPIK Hydroxymethyl dCTP	$\geq$ 99%
Impurities: dNDP & dNMP	< 1%
Impurities: dCTP	< 0.5%
DNases, RNases, Nicking Activity	Negative

## Associated products

Product Name	Pack Size	Catalog No.
dNTP Set	4 x 250µl	BIO-39025
HyperLadder 1kb	200 Lanes	BIO-33025
Agarose	500g	BIO-41025

## Product citations

1. Nestor, C.E., & Meehan, R.R. *Func. Anal. DNA and Chromatin* 259-267 (2014).
2. Wielscher, M., *Translational Oncol.* **6(6)**: 715 (2013).
3. Pastor, W. A., *Nature Protocols* **7(10)**: 1909-1917 (2012).
4. Guo, J.U., *et al. Cell* **145(3)**: 423-434 (2011).
5. Szwagierczak, A., *et al. NAR* **39(12)**: 5149-5156 (2011).

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