



## PRODUCT INFORMATION

# T4 β-glucosyltransferase

Pub. No. MAN0016004

Rev. Date 12.July.2016 (Rev. A.00)

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Lot \_\_\_\_ Expiry Date \_\_

Components	#EO0831
T4 β-glucosyltransferase, 5 U/μL	500 U
10X Epi Buffer	1.2 mL
10X UDP-glucose	0.5 mL

Store at -20 °C

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**For Research Use Only.** Not for use in diagnostic procedures.

## Description

T4 β-glucosyltransferase (T4 BGT) transfers the glucose moiety of uridine diphosphoglucose (UDP-glucose) to the 5-hydroxymethylcytosine (5-hmC) residues in double-stranded DNA generating β-glucosyl-5 hydroxymethylcytosine.

Thermo Scientific T4 BGT is specifically formulated for fast reaction times without compromising the reaction efficiency. The enzyme completes modification of 5-hmC of 1 μg DNA in 15 min at 37 °C.

T4 BGT is supplied with an optimized 10X reaction buffer and 10X UDP-glucose as a cofactor.

## Storage Buffer

T4 β-glucosyltransferase (T4 BGT) is supplied in: 10 mM Tris (pH 7.5 at 25 °C), 500 mM NaCl, 0.1 mM EDTA, 1 mM DTT and 50% (v/v) glycerol.

## Features

- **Specific** – selectively transfers glucose to the hydroxymethyl moiety of 5-hmC
- **Fast** – complete glucosylation of 1 μg DNA in just 15 min
- **Convenient** - supplied with optimized buffer and UDP-glucose.

## Applications

- Locus specific detection of 5-hmC.
- 5-hmC containing DNA enrichment.
- Labeling of 5-hmC residues using a radioactive UDP-glucose donor.

## Unit definition

One unit of T4 BGT protects 0.5 µg of fully 5-hydroxymethylated 1095 bp PCR fragment from digestion with MnlI in 1 hour at 37 °C in 50 µL of recommended reaction buffer.

## CERTIFICATE OF ANALYSIS

### Labeled Oligonucleotide (LO) Assay

No detectable degradation after incubation of single-stranded or double-stranded radiolabeled oligonucleotides with T4 β-glucosyltransferase.

Quality authorized by:



Jurgita Zilinskiene

## Protocol

- Assemble the following reaction at room temperature:

10X Epi Buffer	5 µL
10X UDP-glucose	5 µL
DNA	up to 1 µg
Nuclease-free water	to 49 µL
T4 BGT	1 µL
Total volume	50 µL
- Mix gently and spin down for a few seconds.
- Incubate at 37 °C for 15 min.
- Stop the reaction by heating at 65 °C for 20 min.

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