Thermo SCIENTIFIC

PRODUCT INFORMATION

T4 β-glucosyltransferase

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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 MunI 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.

PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively *for research purposes and in vitro use only*. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.
Please refer to www.thermofisher.com for Material Safety Data Sheet of the product.