T4-BGT

Cat. No. : RK20558

Product components

Components	Component number	Size-1 10 RXN(50 μL/RXN)	Size-2 24 RXN(50 μL/RXN)
T4-BGT	RM20541	10 μL	24 μL
10XABufferS	RM20147	50 μL	120 μL
T4-BGT Reaction Enhancer	RM20818	10 μL	24 μL

Product Description

T4 bacteriophage β -glucosyltransferase (T4-BGT) has high glycosyltransferase activity. The glucose group of uridine diphosphate (UDP-glucose) can be rapidly and completely transferred to the 5-hydroxymethylcytosine (5-hmC) group in double-stranded DNA to form β-glucosyl-5-hydroxymethylcytosine (5-ghmC) .

T4-BGT is a tool enzyme for methylation research, which is used in NGS methylation detection, methylation PCR, and methylation qPCR. Compared with traditional bisulfite treatment, mild enzymatic treatment has less damage to DNA, which can maximize the DNA integrity and sequencing quality. Such advantages specially lie in the methylation treatment of FFPE DNA, cfDNA, and other low-quality or trace DNA samples.

Application

Methylation studies

Locus specific detection of 5-hmC

5-hmC DNA containing enrichment

Labeling of 5-hmC residues using a radioactive UDP-glucose donor

Store

Storage: -20°C for long-term storage

Transportation

Dry ice , or dry ice combined with ice packs for Long-distance transportation. Do not use ice packs for long-distance transportation.

Protocol

1. Glycosylation transfer reactions

1.1. Prepare the following reaction on ice

Component	Volume
DNA	X μL
10XABufferS	5 μL
T4-BGT Reaction Enhancer	1 μL
T4-BGT	1 μL
Nuclease-free water	To 50 μL

Vortex to mix,spin down for few seconds.

1.2. Place the PCR tube on the thermal cycler, set the thermolid temperature to 50 °C, and run the following reaction program:

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Temperature	Time
37℃	1 h
4℃	Hold

Note:1. At the end of the reaction, use 1 μL of Proteinase K (20 mg/mL) (ABclonal, Cat.NO. RK20561) to teminate the reaction, and then use 1.8x magnetic beads (RK20257). to purify the terminated product.

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