GDS End Preparation Module

Instruction for Use

【Product Name】

GDS End Preparation Module

【Cat. No./Spec.】

K025-A (24 rxns); K025-B (96 rxns)

【Product Description】

The GDS End Preparation Module is an end-repair/dA-tailing module for NGS library preparation, and has been optimized to convert 500 pg-1 μg of fragmented DNA to repaired DNA having 5′ phosphorylated, 3′ dA-tailed ends.

【Components】

Component	K025-A (24 rxns)	K025-B (96 rxns)
GDS End Prep Enzyme Mix	120 μL	2×240 μL
GDS End Prep Buffer	240 μL	2×480 μL

【Storage Condition & Shelf Life】

All reagents should be stored at -20°C. The product is valid for 12 months.

【Application】

Convert 500 pg-1 μg of fragmented DNA to repaired DNA with 5′ phosphorylated, 3′ dA-tailed ends.

【Protocol】

Starting material: 500 pg-1 μg DNA fragments. High quality Input DNA of A260/A280 = 1.8-2.0 should be used whenever possible.

If mechanical interruption is used, DNA interruption in 0.1X TE is recommended, not in ultrapure water. If enzyme digestion is used and size selection or purification is not performed, make sure that the stop buffer does not contain excessive metal ion chelating agents or other salts. If the above substances are present, dissolve in 0.1X TE or ultra-pure water after purification, and the volume is not greater than 50 μL.

1. Add the following components to a sterile nuclease-free tube:

Reagents	Volume
GDS End Prep Enzyme Mix	5 μL
GDS End Prep Buffer	10 μL
Fragmented DNA	50 μL

2. Set a 100 μl or 200 μl pipette to 50 μl and then pipette the entire volume up and down at least 10 times to mix thoroughly. Perform a quick spin to collect all liquid from the sides of the tube.

Note: It is important to mix well.

3. Place in a thermal cycler, with the heated lid set to 105° C, and run the following program:

Temperature	Time
20°C	15 min
65°C	15 min
4°C	hold

4. Adapter ligation directly as soon as possible. If necessary, samples can be stored at –20°C; however, a slight loss in yield (~20%) may be observed.

【Library Preparation Module】

GDSBio offers the following DNA and RNA library construction modules that can be used in combination for high-quality library preparation:

Module	Product Name	Cat. No./Spec.
cDNA First Strand Synthesis	GDS RNA First Strand Synthesis Module	K020-A/24 rxns K020-B/96 rxns
Directional cDNA Second Strand Synthesis	GDS Directional RNA Second Strand Synthesis Module	K021-A/24 rxns K021-B/96 rxns
Non-Directional cDNA Second Strand Synthesis	GDS Non-Directional RNA Second Strand Synthesis Module	K022-A/20 rxns K022-B/100 rxns
Fragmentation & End Repair	GDS Fragmentation & End Prep Module	K023-A/24 rxns K023-B/96 rxns
Fragmentation	GDS dsDNA Fragmentase	K024-A/50 rxns K024-B/250 rxns
End Repair/dA-Tailing	GDS End Preparation Module	K025-A/24 rxns K025-B/96 rxns
Adapter Ligation	GDS Ligation Module	K026-A/24 rxns K026-B/96 rxns
Amplification	HIFI Library PCR Master Mix	K007-A/40 rxns

		K007-B/400 rxns K007-C/2000 rxns
Cleanup/Size Selection	GDSPure DNA Selection Magbeads	NC1011/5 mL NC1012/60 mL NC1013/450 mL

This product is for research use only.