

GDS Fast Fragmentation & End Prep Module

Instruction for Use

【Product Name】

GDS Fast Fragmentation & End Prep Module

【Cat. No./Spec.】

K032-A (24 rxns); K032-B (96 rxns)

【Product Description】

GDS Fast Fragmentation & End Prep Module is designed for library construction of high-throughput sequencing platform. The module combines fragmentation of intact DNA, end repair and dA tailing in 8 minutes. Not only the reaction time is minimized, but also the cutting efficiency of trace template is increased. 100 pg ~ 500 ng DNA template can be efficiently fragmented with 5' phosphorylated 3' dA-tailed ends. This product contains the enzymes and buffers required for the reaction, easy to use, and compatible with automatic library preparation equipment.

【Components】

Component	K032-A (24 rxns)	K032-B (96 rxns)
Fast FEP Enzyme Mix	240 μ L	2 \times 480 μ L
Fast FEP Buffer	120 μ L	480 μ L

【Storage Condition & Shelf Life】

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

【Application】

Fragmentation, end repair and dA-tailing in dsDNA library construction.

【Protocol】

1. Ensure that all reagents are completely thawed. Place on ice until use. Prepare the following reaction in a 200 μ L PCR tube:

Reagents	Volume
Input DNA	X μ L

Fast FEP Buffer	5 μ L
Fast FEP Enzyme Mix	10 μ L
ddH ₂ O	To 50 μ L

2. Vortex the reaction for 5 seconds and briefly spin in a microcentrifuge.

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

Temperature	Time
37°C	5~30 min *
65°C	30 min
4°C	hold

* The fragmentation time should be set according to the target fragment size.

4. Adapter ligation directly as soon as possible to avoid excessive DNA fragmentation.

【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 Fast 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.