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NGS Multiplex Oligos for MGI (Index primer mix Set III)

Product Number: EK0617

Shipping and Storage

Storage condition: Store at -20℃, transport with ice packs.

Components

Component	64 rxns
Adaptor for MGI	320μL
Index primer Mix (97-128)for MGI	32×12L

Description

This kit provides Adaptors and Index primer Mix required for next-generation sequencing on the MGI platform and is specially designed for the MGI sequencing platform. The Adaptor has been optimized on the basis of the original MGI platform version. The improved universal Adaptor contains no Barcode sequence to facilitate automated operation, and possesses binding sites for Universal primer and Index primer. Barcode sequences are introduced via Index primers. The optimized adaptor can significantly improve library ligation efficiency, transformation efficiency and amplification efficiency.

This series consists of three kits:

EK0613: NGS Multiplex Adaptor & Primer Kit I (MGI Platform Barcode 1–48)

EK0616: NGS Multiplex Adaptor & Primer Kit II (MGI Platform Barcode 49–96)

EK0617: NGS Multiplex Adaptor & Primer Kit III (MGI Platform Barcode 97–128)

They cover Barcode sequences 1–128 for the MGI sequencing platform. Libraries prepared with this product are compatible with MGI sequencers including BGISEQ-500RS (PE50/PE100/PE150), MGISEQ-2000RS (PE100/PE150), and MGISEQ-200RS (PE100).

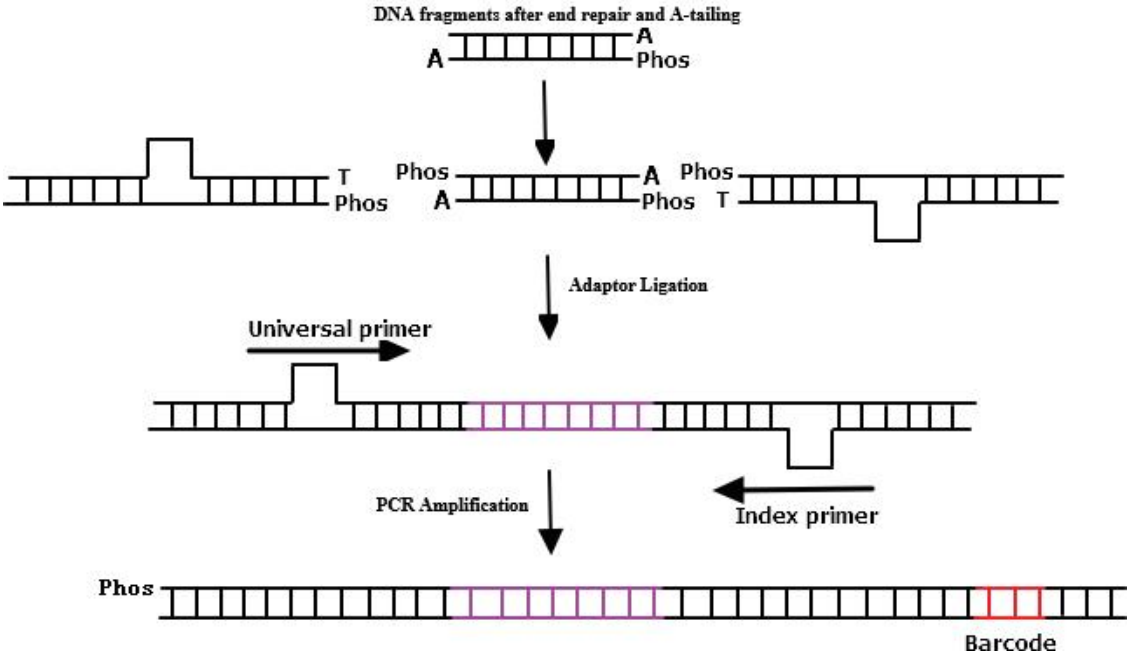
Self-supplied Instruments, Reagents and Consumables

1. Magnetic stand: DynaMag™-2 is recommended.
2. DNA Purification and Recovery Kit: Our magnetic bead-based DNA Purification and Recovery Kit (Cat.No. DNK2508) is recommended.
3. DNA library construction kit: cfDNA Rapid Library Preparation Kit (MGI Platform), Fast NGS Library Kit for Illumina&MGI (Cat.No. PCK85M), and Universal DNA Library Kit (Illumina&MGI) (Cat.No. PCK48) are recommended.
4. Absolute ethanol.
5. Reaction tubes: Low-binding PCR tubes and 1.5 mL centrifuge tubes are recommended.

Pre-experiment Preparation and Important Notes

1. Adaptors are double-stranded. Do not store them above room temperature to avoid denaturation and loss of performance.
2. Briefly centrifuge index primers before opening the cap to collect liquid at the bottom of the tube and prevent cross-contamination between different primers.

Workflow



Protocol

The usage of NGS Multiplex Adaptor & Primer Kit III shall follow the protocol of Rapid DNA Library Preparation Kit (MGI Platform) (Cat.No. PCK85M).

Index primer Mix is formulated with Universal primer and Index primer, including 32 types of Index primers. According to different multiplex sequencing strategies, different Indexes can be added to each sample, or one set of Indexes can be added to a single sample. It is required that all Indexes in the pooled library are grouped by complete sets.

Among Index 97–128, 8 Indexes form one set: 97–104, 105–112, 113–120, and 121–128.

Table: Barcode 97-128 for MGI

Barcode 97	AGGTATTCTT	Barcode 106	ACCAGCGTCA
Barcode 98	CGAATGCAAC	Barcode 107	CGTCAGGCTC
Barcode 99	TTCAACGGCG	Barcode 108	CCTGCTCTAG
Barcode 100	CTCGGCGGAA	Barcode 109	TAACTCAACT
Barcode 101	ACGGTAATGG	Barcode 110	TAGTGACCGC
Barcode 102	GATCCGACGT	Barcode 111	GTGGAGTGAA
Barcode 103	TCACGATACA	Barcode 112	GTCTCATGGT
Barcode 104	GATTCTCTTC	Barcode 113	GAACAACCTA
Barcode 105	AGAATTAATG	Barcode 114	CCAGAGTCAG