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NGS Combinatorial Dual Index Primers Kit for IIIumina (Set I)

Product Number: EK0635

Shipping and Storage

All components are stored at -20°C and transported in ice packs. Do not store this product in an environment with a temperature higher than room temperature and avoid repeated freezing and thawing.

Component

Component	EK0635
Adapter for IIIumina (10μM)	480μL
i7 Index Primers D701-D712 (25μM)	12×20μL
i5 Index Primers D501– D508 (25μM)	8×30μL

Description

The NGS Combinatorial Dual Index Primers Kit for IIIumina (Set III) is a specialized index adapter primer kit for constructing libraries on IIIumina high-throughput sequencing platforms. This kit contains the universal adapter DNA Adapter for IIIumina, 8 i5 Index Prmers, and 12 i7 Index Prmers, which can be used in conjunction with the Fast NGS Library Kit for Illumina&MGI (PCK85M) and theUniversal DNA Library Kit (Illumina&MGI) (PCK48) to construct up to 96 different combinations of double ended index labeled second-generation sequencing libraries. The prepared library can be used for sequencing on NovaSeq, MiSeg, HiSeg 2000125003000/4000, MiniSeq, and NexiSeg sequencing platforms. All reagents provided in the kit have undergone strict quality control and functional validation, ensuring the stability and reproducibility of library construction to the greatest extent possible.

Application

Suitable for constructing dual ended Index tagged libraries on IIIumina high-throughput sequencing platform. Recommended for use with Fast NGS Library Kit for Illumina&MGI (PCK85M) and theUniversal DNA Library Kit (Illumina&MGI) (PCK48).

Product components

Purpose	Component	EK0635
IIIumina universal connector	DNA Adapter for IIIumina	480μL
i7 Index Primer	D701	20μL
	D702	20μL
	D703	20μL
	D704	20μL
	D705	20μL
	D706	20μL
	D707	20μL
	D708	20μL
	D709	20μL
	D710	20μL
	D711	20μL
	D712	20μL
i5 Index Primer	D501	30μL
	D502	30μL
	D503	30μL

D504	30μL
D505	30μL
D506	30μL
D507	30μL
D508	30μL

Note: The usage of a single library DNA Adapter for IIIumina depends on the initial template input, with both i7 Index Primers and i5 Index Primers using 2.5μL.

Sequence information

DNA Adapter for IIIumina

5′-/Phos/ GATCGGAAGAGCACACGTCTGAACTCCAGT*C -3′

5′-ACACTCTTTCCCTACACGACGCTCTTCCGATC*T-3′

(* represents thio, Phos represents phosphorylation)

i5 Index Primers

5′-AATGATACGGCGACCACCGAGATCTACAC

[i5]ACACTCTTTCCCTACACGACGCTCTTCCGATC*T-3′

i7 Index Primers

5′-CAAGCAGAAGACGGCATACGAGAT

[i7]GTGACTGGAGTTCAGACGTGTGCTCTTCCGATC*T-3′

(* represents thio)

[i5] represents an 8 bp i5 Index sequence, and [i7] represents an 8 bp i7 Index sequence.

The Index names corresponding to each primer, the Index sequences contained in the primers, and the Index sequence information entered in the Sample Sheet during sequencing are shown in the following table:

Product components

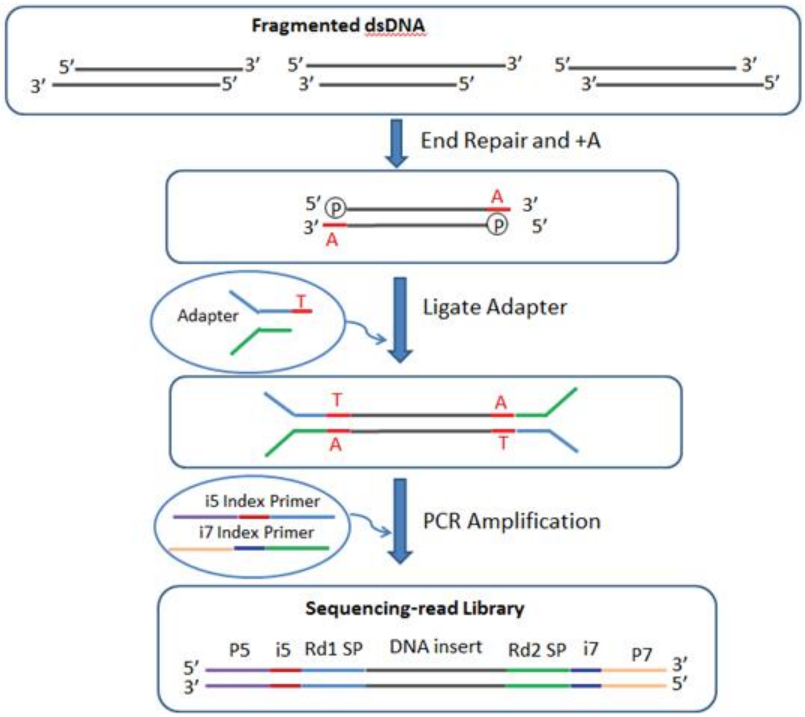
i5 Index Name	Index Bases in i5 Index Primer	i5 Bases for Sample Sheet	
		NovaSeq v1.0, MiSeq, HiSeq 2000/2500	NovaSeq v1.5, MiniSeq, NextSeq, HiSeq 3000/4000, HiSeq X
D501	TATAGCCT	TATAGCCT	AGGCTATA
D502	ATAGAGGC	ATAGAGGC	GCCTCTAT
D503	CCTATCCT	CCTATCCT	AGGATAGG
D504	GGCTCTGA	GGCTCTGA	TCAGAGCC
D505	AGGCGAAG	AGGCGAAG	CTTCGCCT
D506	TAATCTTA	TAATCTTA	TAAGATTA
D507	CAGGACGT	CAGGACGT	ACGTCCTG
D508	GTACTGAC	GTACTGAC	GTCAGTAC

i7 Index Name	Index Bases in i7 Index Prime	i7 Bases for Sample Sheet
D701	CGAGTAAT	ATTACTCG
D702	TCTCCGGA	TCCGGAGA
D703	AATGAGCG	CGCTCATT
D704	GGAATCTC	GAGATTCC
D705	TTCTGAAT	ATTCAGAA

D706	ACGAATTC	GAATTCGT
D707	AGCTTCAG	CTGAAGCT
D708	GCGCATTA	TAATGCGC
D709	CATAGCCG	CGGCTATG
D710	TTCGCGGA	TCCGCGAA
D711	GCGCGAGA	TCTCGCGC
D712	CTATCGC	AGCGATAG

Library construction process and library structure

This kit is used in conjunction with Fast NGS Library Kit for Illumina&MGI (PCK85M) and theUniversal DNA Library Kit (Illumina&MGI) (PCK48). The schematic diagram of the library construction process is as follows:



The constructed library structure is as follows:

5'- AATGATACGGCGACCACCGAGATCTACAC [i5]

ACACTCTTTCCCTACACGACGCTCTTCCGATCT [DNA insert]

AGATCGGAAGAGCACACGTCTGAACTCCAGTCAC [i7]

ATCTCGTATGCCGTCTTCTGCTTG-3'

i5: i5 index, 8 bases

i7: i7 index, 8 bases

DNA insert: target sequencing sequence for insertion