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NGS Combinatorial Dual Index Primers Kit for Illumina (Set II)

Product Number: EK0704

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	EK0704
Adapter for Illumina (10μM)	480μL
i7 Index Primers D713-D724 (25μM)	12×20μL
i5 Index Primers D509– D516 (25μM)	8×30μL

Description

The NGS Combinatorial Dual Index Primers Kit for Illumina (Set II) is a specialized index adapter primer kit for constructing libraries on Illumina high-throughput sequencing platforms. This kit contains the universal adapter DNA Adapter for Illumina, 8 i5 Index Primers, and 12 i7 Index Primers, which can be used in conjunction with the Fast NGS Library Kit for Illumina&MGI (PCK85M) and the Universal 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, MiSeq, HiSeq 2000/12500/3000/4000, MiniSeq, and NextSeq 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 Illumina high-throughput sequencing platform. Recommended for use with Fast NGS Library Kit for Illumina&MGI (PCK85M) and the Universal DNA Library Kit (Illumina&MGI) (PCK48).

Product components

Purpose	Component	EK0704
Illumina universal connector	DNA Adapter for Illumina	480μL
i7 Index Primer	D713	20μL
	D714	20μL
	D715	20μL
	D716	20μL
	D717	20μL
	D718	20μL
	D719	20μL
	D720	20μL
	D721	20μL
	D722	20μL
	D723	20μL
	D724	20μL
i5 Index Primer	D509	30μL
	D510	30μL
	D511	30μL

For Research Use Only



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D512	30μL
D513	30μL
D514	30μL
D515	30μL
D516	30μL

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

Sequence information

DNA Adapter for Illumina

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
D509	GACCTGTA	GACCTGTA	TACAGGTC
D510	ATGTAAC	ATGTAAC	AGTTACAT
D511	GTTTCAGA	GTTTCAGA	TCTGAAAC
D512	CACAGGAT	CACAGGAT	ATCCTGTG
D513	TAGCTGCC	TAGCTGCC	GGCAGCTA
D514	AGCGAATG	AGCGAATG	CATTCGCT
D515	TATGCTGC	TATGCTGC	GCAGCATA
D516	AGAAGACT	AGAAGACT	AGTCTTCT

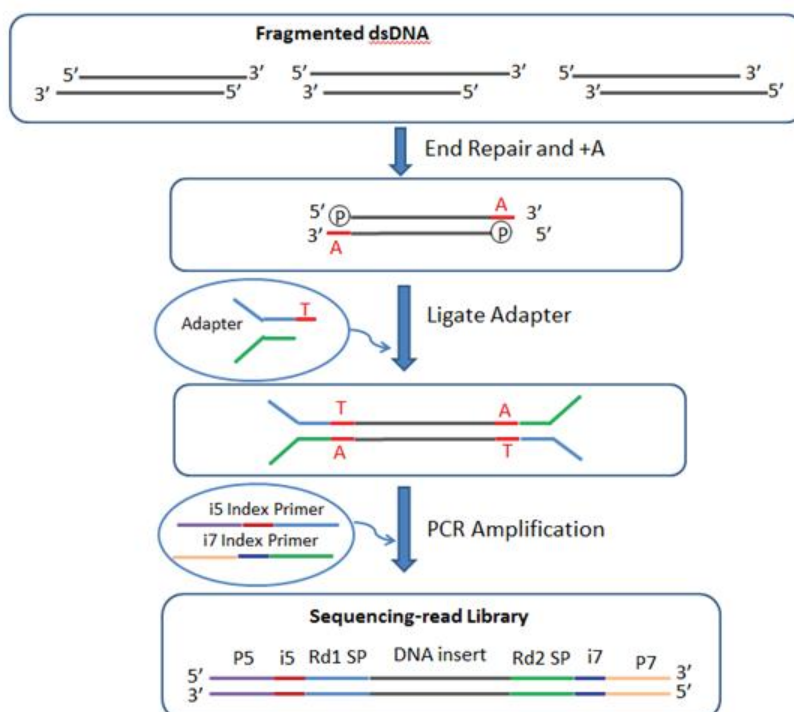
i7 Index Name	Index Bases in i7 Index Prime	i7 Bases for Sample Sheet
D713	CCTACACG	CGTGTAAGG
D714	GTAGTGTC	GACACTAC
D715	TGTATGCA	TGCATACA
D716	CCAGACTG	CAGTCTGG
D717	AGGTGCCA	TGGCACCT

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D718	TCACCTTG	CAAGGTGA
D719	GTATCTTT	AAAGATAC
D720	CAGCTCCA	TGGAGCTG
D721	TCGCCTTA	TAAGGCGA
D722	CTAGTACG	CGTACTAG
D723	AGCGTAGC	GCTACGCT
D724	GAGCCTCG	CGAGGCTC

Library construction process and library structure

This kit is used in conjunction with Fast NGS Library Kit for Illumina&MGI (PCK85M) and the Universal 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