Version: 10/2023

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

Cat. No. : CW3042S (96 rxns)

Storage Condition: All components stored at -20 °C, transport on dry ice. Do not store this product in an environment above room temperature and avoid repeated freeze-thaw.

Components

Component	CW3042S 96 rxns
Adapter for Illumina (10 μM)	480 μL
i7 Index Primers D701-D712(25 μM)	12x20 μL
i5 Index Primers D501-D508(25 μM)	8x30 μL

Introduction

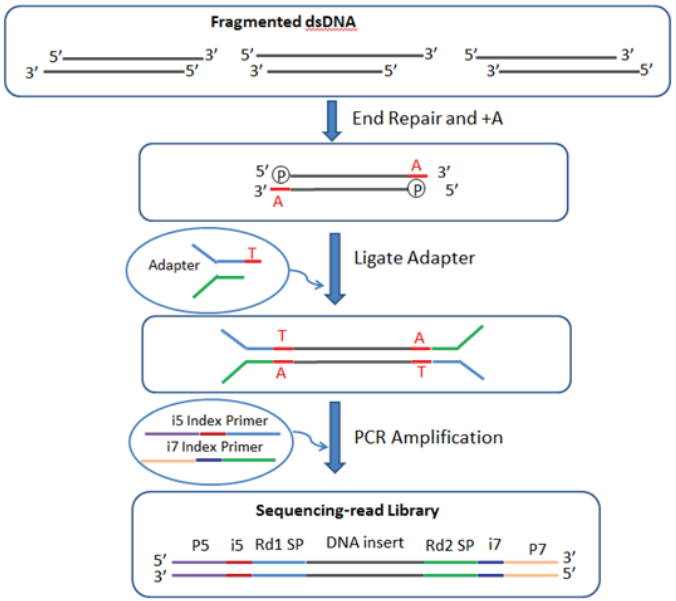
NGS Combinatorial Dual Index Primers Kit for Illumina (Set I) is a dedicated index adapter primer kit for the construction of the Illumina high-throughput sequencing platform library. This kit contains universal DNA Adapter for Illumina, 8 i5 Index Primers, and 12 i7 Index Primers. Along with the Fast DNA Library Prep Set for Illumina & MGI (CW3045) and CWseq Universal DirectFast DNA Library Prep Kit (Illumina & MGI) (CW3048), it can be used to prepare up to 96 different combinations of dual Index-labeled next-generation sequencing libraries. The prepared libraries can be used for sequencing platforms such as NovaSeq, MiSeq, HiSeq 2000/2500/3000/4000, MiniSeq, and NextSeq. All reagents provided in the kit have undergone rigorous quality control and functional verification to ensure the stability and repeatability of the library preparation to the greatest extent.

Applicable Equipment

Suitable for dual Index labeled library preparation on the Illumina high-throughput sequencing platform. It is recommended to use with Fast DNA Library Prep Set for Illumina & MGI (CW3045) and CWseq Universal DirectFast DNA Library Prep Kit (Illumina & MGI) (CW3048).

Library preparation process and library structure

This kit should be used with the Fast DNA Library Prep Set for Illumina & MGI (CW3045) and CWseq Universal DirectFast DNA Library Prep Kit (Illumina & MGI) (CW3048), and the library preparation process is shown below:



The structure of the prepared library is shown as follows:

5' - AATGATACGGCGACCACCGAGATCTACAC [i5]
ACACTCTTTCCCTACACGACGCTCTTCCGATCT [DNA insert]
AGATCGGAAGAGCACACGTCTGAACTCCAGTCAC [i7]
ATCTCGTATGCCGTCTTCTGCTTG-3'
i5: i5 index, 8 bases
i7: i7 index, 8 bases
DNA insert: Inserted target sequence

Product components

Use	Component	CW3042S(96 rxns)
Illumina universal adapter	DNA Adapter for Illumina	480 μL
i7 Index Primer	D701	20 μL
	D702	20 μL
	D703	20 μL
	D704	20 μL
	D705	20 μL
	D706	20 μL
	D707	20 μL
	D708	20 μL
	D709	20 μL
	D710	20 μL
	D711	20 μL
	0712	20 μL
i5 Index Primer	D501	30 μL
	0502	30 μL
	D503	30 μL
	D504	30 μL
	D505	30 μL
	D506	30 μL
	0507	30 μL
	D508	30 μL

Note: The amount of DNA Adapter for Illumina used in a single library is based on the starter template input. Both i7 Index Primers and i5 Index Primers are used in 2.5 μL.

Sequence information

DNA Adapter for Illumina
5’ -/Phos/ GATCGGAAGAGCACACGTCTGAACTCCAGT* C -3’
5’ -ACACTCTTTCCCTACACGACGCTCTTCCGATC* T-3'
(* for thio, Phos for phosphorylation)
i5 Index Primers
5’ -AATGATACGGCGACCACCGAGATCTACAC
[i5] ACACTCTTTCCCTACACGACGCTCTTCCGATC *T-3’
i7 Index Primers
5' - CAAGCAGAAGACGGCATACGAGAT
[i7] GTGACTGGAGTTCAGACGTGTGCTCTTCCGATC*T-3’
(* indicates thio)

[i5] means the 8 bp i5 Index sequence, and [i7] means the 8 bp i7 Index sequence. The Index name corresponded to each primer, the Index sequence contained in the primer, and the Index sequence information to be 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 Primer	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	CTATCGCT	AGCGATAG