*Trans*NGS® Tn5 Index Kit for Illumina®

Cat. No. KI101

Storage: at -20°C for two years

Description

*Trans*NGS® Tn5 Index Kit for Illumina® contains primers that are ideally suited for multiplex sample preparation for next-generation sequencing. This kit contains 12 unique Index 1 (i7) Primers (N701-N712) and 8 unique Index 2 (i5) Primers (N501-N508) at the concentration of 10 µM. 96 uniquely dual-indexed samples can be prepared using this kit.

Applications

Specially suited for *Trans*NGS® Tn5 DNA Library Prep Kit for Illumina®, (KP101). Create up to 96 unique tagged sequencing libraries.

Kit Contents

Component		KI101-01	KI101-02
Index 1 (i7) Primer	N701	10 µl	40 µl
	N702	10 µl	40 µl
	N703	10 µl	40 µl
	N704	10 µl	40 µl
	N705	10 µl	40 µl
	N706	10 µl	40 µl
	N707	10 µl	40 µl
	N708	10 µl	40 µl
	N709	10 µl	40 µl
	N710	10 µl	40 µl
	N711	10 µl	40 µl
	N712	10 µl	40 µl
Index 2 (i5) Primer	N501	15 µl	60 µl
	N502	15 µl	60 µl
	N503	15 µl	60 µl
	N504	15 µl	60 µl
	N505	15 µl	60 µl
	N506	15 µl	60 µl
	N507	15 µl	60 µl
	N508	15 µl	60 µl

Index Primer Information

Index 1 (i7) Primer 

Index 2 (i5) Primer 

S7: Complementary pairing sequence of transposition product; Partial sequence of Read 2 Sequencing Primer;
S5: Complementary pairing sequence of transposition product; Partial sequence of Read 1 Sequencing Primer.

General Information

G/T is detected by a green laser and A/C is detected by a red laser when using Illumina sequencer (Table 1). Color balance is required during the process of sequencing. It is necessary to make sure that both green laser bases and red laser bases are included at each cycle when combining indexes. Some of correct and incorrect combinations are given in table 2. Libraries pooling guidance is provided in table 3.

Table 1 Index Sequences

Component		i7 Bases in Index Primer	Corresponding sequencing result
Index 1 (i7) Primer	N701	TCGCCTTA	T A A G G C G A
	N702	CTAGTACG	C G T A C T A G
	N703	TTCTGCCT	A G G C A G A A
	N704	GCTCAGGA	T C C T G A G C
	N705	AGGAGTCC	G G A C T C C T
	N706	CATGCCTA	T A G G C A T G
	N707	GTAGAGAG	C T C T C T A C
	N708	CCTCTCTG	C A G A G A G G
	N709	AGCGTAGC	G C T A C G C T
	N710	CAGCCTCG	C G A G G C T G
	N711	TGCCTCTT	A A G A G G C A
	N712	TCCTCTAC	G T A G A G G A

Component		i5 Bases in Index Primer	Corresponding sequencing result	
			MiSeq, HiSeq 2000/2500	MiniSeq, NextSeq, Hiseq 3000/4000
Index 2 (i5) Primer	N501	TAGATCGC	T A G A T C G C	G C G A T C T A
	N502	CTCTCTAT	C T C T C T A T	A T A G A G A G
	N503	TATCCTCT	T A T C C T C T	A G A G G A T A
	N504	AGAGTAGA	A G A G T A G A	T C T A C T C T
	N505	GTAAGGAG	G T A A G G A G	C T C C T T A C
	N506	ACTGCATA	A C T G C A T A	T A T G C A G T
	N507	AAGGAGTA	A A G G A G T A	T A C T C C T T
	N508	CTAAGCCT	C T A A G C C T	A G G C T T A G

Table 2 Examples of Correct and Incorrect Index Combinations

Correct				Incorrect			
N701	TAAGGCGA	N501	TAGATCGC	N701	TAAGGCGA	N502	CTCTCTAT
N702	CGTACTAG	N501	TAGATCGC	N702	CGTACTAG	N502	CTCTCTAT
N705	GGACTCCT	N502	CTCTCTAT	N705	GGACTCCT	N503	TATCCTCT
N706	TAGGCATG	N502	CTCTCTAT	N706	TAGGCATG	N503	TATCCTCT
	√√√√√√√√		√√√√√√√√		√√√√√√√√		√√√××××

√: signal in both color

×: signal missing in one color channel

Table 3 Libraries Pooling Guidance

Number of Libraries	Index 1 (i7) Selection	Index 2 (i5) Selection
1	Any N7xx	Any N5xx (Single Index Sequencing Optional)
2	Option 1: N701 and N702 Option 2: N702 and N704	
3	Option 1: N701, N702 and N704 Option 2: N703, N705 and N706	
4-5	Option 1: N701, N702, N704 and any other N7xx Option 2: N703, N705, N706 and any other N7xx	
6	N701-N706	
7-12	Option 1: N701-N706 and any other N7xx	Any N5xx (Single Index Sequencing Optional)
	Option 2: N701, N702, N704 and any other N7xx	Option 1: N501 and N502 Option 2: N503 and N504 Option 3: N505 and N506
	Option 3: N703, N705, N706 and any other N7xx	Option 1: N501 and N502 Option 2: N503 and N504 Option 3: N505 and N506
>12	N701-N706 and any other N7xx	Option 1: N501 and N502 and any other N5xx Option 2: N503 and N504 and any other N5xx Option 3: N505 and N506 and any other N5xx

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