

1. Introduction

iUDI Plate LACEseq unique dual index plate contains unique dual-indexed PCR primers for amplification of indexed Illumina®-compatible NGS libraries. These primers can be used in LACEseq kit that requires TruSeq™-Compatible Indexing Primers.

iUDI Plate LACEseq contains indexed PCR primers and offer up to 24 pair unique dual indexes for multiplexing up to 24 samples. The indexed PCR primers are supplied pre-dispensed in 96- wells PCR plate. Each dual index is provided in sufficient amounts for 5-10 reactions.

All indexes have been functionally validated to work with Illumina sequencing systems using two- or four- channel chemistry for base calling.

2. Product Catalog

Store all components at -20°C.

All the primers present a concentration of 20 µM total (10 µM each Primer)

| Product name* | Cat. No. | Volume per tube | Sold between |
|-------------------------------|-------------------|-----------------|--------------|
| iUDI Plate LACEseq set 1 – 16 | #LS-UDI-001-16 | 10 µl | 2018-2021 |
| iUDI Plate LACEseq set 2 – 24 | #LS-UDI-002-24 | 10 µl | 2018-2021 |
| iUDI Plate LACEseq set 3 – 24 | #LS-UDI-003-24 | 10 µl | 2018-2021 |
| iUDI Plate LACEseq set 4 – 24 | #LS-UDI-004-24 | 5 µl | 2018-2021 |
| iUDI Plate LACEseq set 5 – 24 | #LS-UDI-005-24 | 5 µl | 2018-2021 |
| iUDI Plate LACEseq set 012A | #LS-UDI-012A-12 | 5 µl | 2021-2022 |
| iUDI Plate LACEseq set 012B | #LS-UDI-012B-12 | 5 µl | 2021-2022 |
| iUDI Plate LACEseq set 012C | #LS-UDI-012C-12 | 5 µl | 2021-2022 |
| iUDI Plate LACEseq set 012D | #LS-UDI-012D-12 | 5 µl | 2021-2022 |
| iUDI Plate LACEseq set Z1-12 | #LS-UDI-012Z1-12 | 5 µl | 2023- |
| iUDI Plate LACEseq set Z13-24 | #LS-UDI-012Z13-24 | 5 µl | 2023- |
| iUDI Plate LACEseq set Z25-36 | #LS-UDI-012Z25-36 | 5 µl | 2023- |
| iUDI Plate LACEseq set Z37-48 | #LS-UDI-012Z37-48 | 5 µl | 2023- |

*Please verify catalogue number

3. General Considerations

A. Best Practices

- It is not recommended to subject iUDI Plate LACEseq index plates to more than five freeze/thaw cycles.
- Prior to use, remove the lid. Thaw for 10 minutes at room temperature, then spin the plate to pellet contents at the bottom of the tubes. Ensure the plate show no visible condensation prior to opening. **Keep the plate on ice during use.**
- When preparing the indexing PCR, pierce the seal of the plate using a pipette tip, then directly pipet the required volume of your indexing primers. Always use a separate pipette tip for each well to avoid cross contamination of indexes. Seal again the plate after usage to avoid spillover.

B. Product Compatibility

The iUDI Plate LACEseq plate are designed for use with the LACEseq™ and PAGExt™ IMMAGINA products (Catalog no #LS-001 and Catalog no #KGE-002). Please refer to the LACEseq™ and PAGExt™ kit-specific user manual for instructions on using the indexed PCR primers provided in the iUDI Plate LACEseq plate. Primer Pairs are not methylated.

NOTE: No additional PCR reagents are provided with this index set. The required enzymes and buffers are provided with the respective main kit (LACEseq™ Library Prep Kit for Illumina).

C. Multiplexing and Index Pooling

It is important to select appropriate single indexes that are unique and meet the Illumina-recommended compatibility requirements. The indexes of the LACEseq iUDI primer pairs are color-balanced in sets of four (1-4, 5-8, 9-12, 13-16). Indexes within each group of four are fully color balanced and can be pooled for sequencing. Less than four samples can be multiplexed, but verify color balance before pooling. Do **not** pool libraries across a row.

We do not recommend multiplexing Immagina libraries with libraries from other vendors in the same sequencing lane. Though this is possible in principle, specific optimization of index combinations, library pooling conditions, and loading amounts may be required. Sequencing complex pools that include different library types at different lane shares may have unpredictable effects on sequencing run metrics, read quality, read outputs, and / or demultiplexing performance. Immagina assumes no responsibility for the altered performance of Immagina libraries sequenced in combination with external library types in the same lane (or run).

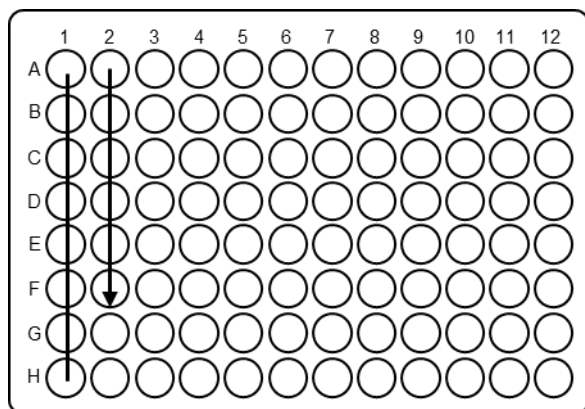


Figure 1. Index map and multiplexing strategy for the iUDI Plate LACEseq plates. We recommend pooling indexes down a column in group of four. Do not pool libraries between rows.

4. iUDI LACEseq Plates Unique Dual Index Sequences

Set 1. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 1 – 16, Cat. Number #LS-UDI-001-16**, the unique dual indexes (LU1-LU16) are 8-nt long i5 and i7 dual index sequences (Table I).

| IMMAGINA index name | Well position | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|--------------------------|---|---|--|
| LU1 | A1 | ATATGCGC | GCGCATAT | CTGATCGT |
| LU2 | B1 | TGGTACAG | CTGTACCA | ACTCTCGA |
| LU3 | C1 | AACCGTTC | GAACGGTT | TGAGCTAG |
| LU4 | D1 | TAACCGGT | ACCGGTTA | GAGACGAT |
| LU5 | E1 | GAACATCG | CGATGTTC | CTTGTCGA |
| LU6 | F1 | CCTTGTAG | CTACAAGG | TTCCAAGG |
| LU7 | G1 | TCAGGCTT | AAGCCTGA | CGCATGAT |
| LU8 | H1 | GTTCTCGT | ACGAGAAC | ACGGAACA |
| LU9 | A2 | AGAACGAG | CTCGTTCT | CGGCTAAT |
| LU10 | B2 | TGCTTCCA | TGGAAGCA | ATCGATCG |
| LU11 | C2 | CTTCGACT | AGTCGAAG | GCAAGATC |
| LU12 | D2 | CACCTGTT | AACAGGTG | GCTATCCT |
| LU13 | E2 | ATCACACG | CGTGTGAT | TACGCTAC |
| LU14 | F2 | CCGTAAGA | TCTTACGG | TGGACTCT |
| LU15 | G2 | TACGCCTT | AAGGCGTA | AGAGTAGC |
| LU16 | H2 | CGACGTTA | TAACGTCG | ATCCAGAG |

Table I. iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-001-16

Set 2. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 2 – 24, Cat. Number #LS-UDI-002-24**, the unique dual indexes (Lv2U1-Lv2U24) are 8-nt long i5 and i7 dual index sequences (Table II).

| IMMAGINA index name | Well position | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|--------------------------|---|---|--|
| Lv2U1 | A1 | AGAGTCCA | TGGACTCT | GTCATCGT |
| Lv2U2 | B1 | GCTCAGTT | AACTGAGC | AAGGCGTA |
| Lv2U3 | C1 | CAGGTTCA | TGAACCTG | GAACCTTC |
| Lv2U4 | D1 | GAACGGTT | AACCGTTC | ACCTCTTC |
| Lv2U5 | E1 | ACTACGGT | ACCGTAGT | GTCGATTG |
| Lv2U6 | F1 | GTCTGAGT | ACTCAGAC | CATACGGA |
| Lv2U7 | G1 | ACGCAGTA | TACTGCGT | ATCTGACC |
| Lv2U8 | H1 | GTAGCGTA | TACGCTAC | GACCGATA |
| Lv2U9 | A2 | AACGTAGC | GCTACGTT | CAGGATGT |
| Lv2U10 | B2 | TATGCGGT | ACCGCATA | GATGGAGT |
| Lv2U11 | C2 | AGAAGGAC | GTCCTTCT | CTGCCATA |
| Lv2U12 | D2 | ATGAGTGC | GCACTCAT | AGGTAGGA |
| Lv2U13 | E2 | GGAATGTC | GACATTCC | ATAGTCGG |
| Lv2U14 | F2 | CTCGTTCT | AGAACGAG | TCCGATCA |
| Lv2U15 | G2 | CCTTAGGT | ACCTAAGG | CTCTTGTC |
| Lv2U16 | H2 | GACTACGA | TCGTAGTC | GAGGCATT |
| Lv2U17 | A3 | AGGCAATG | CATTGCCT | CGCAACTA |
| Lv2U18 | B3 | ATCCGTTG | CAACGGAT | CGAATACG |
| Lv2U19 | C3 | TTCGGCTA | TAGCCGAA | GGCATTCT |
| Lv2U20 | D3 | ACGTATGG | CCATACGT | ATGTGGAC |
| Lv2U21 | E3 | CGGAGTAT | ATACTCCG | TTCCAGGT |
| Lv2U22 | F3 | TCCAAC TG | CAGTTGGA | AGACATGC |
| Lv2U23 | G3 | ACAGCAAG | CTTGCTGT | GGACATCA |
| Lv2U24 | H3 | TTGAGCTC | GAGCTCAA | AGCGTGTA |

Table II. iUDI Plate LACEseq **Unique Dual Index Sequences Cat. Number #LS-UDI-002-24**

Set 3. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 3 – 24, Cat. Number #LS-UDI-003-24**, the unique dual indexes (Lv3U1-Lv3U24) are 8-nt long i5 and i7 dual index sequences (Table III).

| IMMAGINA index name | Well position | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|--------------------------|---|---|--|
| Lv3U1 | A1 | CCGGAATA | TATTCCGG | GGTACTTC |
| Lv3U2 | B1 | CGATTCTG | CAGAATCG | AGAGCAGA |
| Lv3U3 | C1 | GCCTATGT | ACATAGGC | TAGGAGCT |
| Lv3U4 | D1 | CGTGTGAT | ATCACACG | CCTCGTTA |
| Lv3U5 | E1 | AGACGCTA | TAGCGTCT | AGATCGTC |
| Lv3U6 | F1 | GGATGTAG | CTACATCC | CGGATCAA |
| Lv3U7 | G1 | ACCGAATG | CATTCGGT | TCGTGCAT |
| Lv3U8 | H1 | GGAGGAAT | ATTCCTCC | CAGCATAC |
| Lv3U9 | A2 | CATCCAAG | CTTGATG | GCTTCACA |
| Lv3U10 | B2 | TGCAAGAC | GTCTTGCA | AAGACGAG |
| Lv3U11 | C2 | AGTCAGGT | ACCTGACT | CTTCGGTT |
| Lv3U12 | D2 | GATTGTCC | GGACAATC | AAGCATCG |
| Lv3U13 | E2 | CTGACTAC | GTAGTCAG | CTCAAGCT |
| Lv3U14 | F2 | AAGCGACT | AGTCGCTT | ACAGTGAC |
| Lv3U15 | G2 | TCCTGGTA | TACCAGGA | CGCTACAT |
| Lv3U16 | H2 | AAGTCCTC | GAGGACTT | GCCTTCTT |
| Lv3U17 | A3 | AGCCTATC | GATAGGCT | ACGTCGTT |
| Lv3U18 | B3 | GACACAGT | ACTGTGTC | TACGGTCT |
| Lv3U19 | C3 | CTGTACCA | TGGTACAG | GAAGATCC |
| Lv3U20 | D3 | TACTCCAG | CTGGAGTA | CGTCTAAC |
| Lv3U21 | E3 | ACAGAGGT | ACCTCTGT | CTAAGACC |
| Lv3U22 | F3 | GGTAACGT | ACGTTACC | GCATAACG |
| Lv3U23 | G3 | ATGGCGAT | ATCGCCAT | CCTAACAG |
| Lv3U24 | H3 | TCACCTAG | CTAGGTGA | ACGGACTT |

Table III. iUDI Plate LACEseq **Unique Dual Index Sequences Cat. Number #LS-UDI-003-24**

Set 4. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 4 – 24, Cat. Number #LS-UDI-004-24**, the unique dual indexes (1-24) are 8-nt long i5 and i7 dual index sequences (Table IV).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|----------------------------|---|---|--|
| 1 | TCGTCTGA | TCAGACGA | CAGTGCTT |
| 2 | AGATACGG | CCGTATCT | TAGCCATG |
| 3 | CCGCTTAA | TTAAGCGG | ACATGGAG |
| 4 | AGCCGTAA | TTACGGCT | GCAATTCC |
| 5 | CCACATTG | CAATGTGG | AACCGTGT |
| 6 | GCAATGAG | CTCATTGC | CTACAAGG |
| 7 | CGCCTTAT | ATAAGGCG | ACCTTCGA |
| 8 | AACCAGAG | CTCTGGTT | GGAACATG |
| 9 | CACCAGTT | AACTGGTG | CCAGTATC |
| 10 | TTGCGAGA | TCTCGCAA | AACAGTCC |
| 11 | ACAAGCTC | GAGCTTGT | TCGGATTC |
| 12 | GATAGCCA | TGGCTATC | CAACGAGT |
| 13 | CAGAACTG | CAGTTCTG | CGCGTATT |
| 14 | CAGATCCT | AGGATCTG | TGGTATCC |
| 15 | ATCCTTCC | GGAAGGAT | CAAGGTAC |
| 16 | AGAAGCCT | AGGCTTCT | ACGGTACA |
| 17 | CCTTCCAT | ATGGAAGG | TCCACGTT |
| 18 | TAGAACGC | GCGTTCTA | ACCTCAGT |
| 19 | AACAGCGA | TCGCTGTT | ACACGAGA |
| 20 | ACCGGTTA | TAACCGGT | CACTGTAG |
| 21 | GATCAGAC | GTCTGATC | GCGTTAGA |
| 22 | CACGTCTA | TAGACGTG | AACGCCTT |
| 23 | TCGAGAGT | ACTCTCGA | ACCATGTC |
| 24 | ATACTGGC | GCCAGTAT | GATCTTGC |

Table IV. iUDI Plate LACEseq **Unique Dual Index Sequences Cat. Number #LS-UDI-004-24**

Set 5. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 5 – 24, Cat. Number #LS-UDI-005-24**, the unique dual indexes (25-48) are 8-nt long i5 and i7 dual index sequences (Table V).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|----------------------------|---|---|--|
| 25 | GGTTGAAC | GTTCAACC | CCGTAACT |
| 26 | CCTCGAAT | ATTCGAGG | AACAAGGC |
| 27 | TGGCTACA | TGTAGCCA | TTGCAACG |
| 28 | CAGGTAAG | CTTACCTG | CAATCAGG |
| 29 | GTAAGCAC | GTGCTTAC | GTACACCT |
| 30 | AACACGCT | AGCGTGTT | CGAGTTAG |
| 31 | TTACCGAC | GTCGGTAA | ACAGGCAT |
| 32 | ACCGCTAT | ATAGCGGT | GTTCCATG |
| 33 | CATGAGCA | TGCTCATG | CACGATTC |
| 34 | TGACCGTT | AACGGTCA | CTCTCAGA |
| 35 | ACACTCTG | CAGAGTGT | GAACGAAG |
| 36 | GAGCAATC | GATTGCTC | CATCACGT |
| 37 | CAATGCGA | TCGCATTG | CTCGGTAA |
| 38 | CAACTTGG | CCAAGTTG | CCAAGTAG |
| 39 | TCTAGGAG | CTCCTAGA | GGTGTACA |
| 40 | CCAAGGTT | AACCTTGG | CCTGTCAA |
| 41 | CTGGTCAT | ATGACCAG | ACAACGTG |
| 42 | ACCATAGG | CCTATGGT | TGGACCAT |
| 43 | GCCTTAAC | GTTAAGGC | CACATGGT |
| 44 | TATGGCAC | GTGCCATA | AACTTGCC |
| 45 | ACGAATCC | GGATTTCGT | CCTCATCT |
| 46 | TCACTCGA | TCGAGTGA | AGTACACG |
| 47 | CAGACGTT | AACGTCTG | CCTACCTA |
| 48 | GTCAACAG | CTGTTGAC | TCAGTAGG |

Table V. iUDI Plate LACEseq **Unique Dual Index Sequences Cat. Number #LS-UDI-005-24**

Set 012A-12. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 012A – 12, Cat. Number #LS-UDI-012A-12**, the unique dual indexes (1-12) are 8-nt long i5 and i7 dual index sequences (Table VI).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|----------------------------|---|---|--|
| 1 | TCGTCTGA | TCAGACGA | CAGTGCTT |
| 2 | AGATACGG | CCGTATCT | TAGCCATG |
| 3 | CCGCTTAA | TTAAGCGG | ACATGGAG |
| 4 | AGCCGTAA | TTACGGCT | GCAATTCC |
| 5 | CCACATTG | CAATGTGG | AACCGTGT |
| 6 | GCAATGAG | CTCATTGC | CTACAAGG |
| 7 | CGCCTTAT | ATAAGGCG | ACCTTCGA |
| 8 | AACCAGAG | CTCTGGTT | GGAACATG |
| 9 | CACCAGTT | AACTGGTG | CCAGTATC |
| 10 | TTGCGAGA | TCTCGCAA | AACAGTCC |
| 11 | ACAAGCTC | GAGCTTGT | TCGGATTC |
| 12 | GATAGCCA | TGGCTATC | CAACGAGT |

Table VI. *iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-012A-12*

Set 012B-12. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 012B – 12, Cat. Number #LS-UDI-012B-12**, the unique dual indexes (13-24) are 8-nt long i5 and i7 dual index sequences (Table VII).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|----------------------------|---|---|--|
| 13 | CAGAACTG | CAGTTCTG | CGCGTATT |
| 14 | CAGATCCT | AGGATCTG | TGGTATCC |
| 15 | ATCCTTCC | GGAAGGAT | CAAGGTAC |
| 16 | AGAAGCCT | AGGCTTCT | ACGGTACA |
| 17 | CCTTCCAT | ATGGAAGG | TCCACGTT |
| 18 | TAGAACGC | GCGTTCTA | ACCTCAGT |
| 19 | AACAGCGA | TCGCTGTT | ACACGAGA |
| 20 | ACCGGTTA | TAACCGGT | CACTGTAG |
| 21 | GATCAGAC | GTCTGATC | GCGTTAGA |
| 22 | CACGTCTA | TAGACGTG | AACGCCTT |
| 23 | TCGAGAGT | ACTCTCGA | ACCATGTC |
| 24 | ATACTGGC | GCCAGTAT | GATCTTGC |

Table VII. *iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-012B-12*

Set 012C-12. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 012C – 12, Cat. Number #LS-UDI-012C-12**, the unique dual indexes (25-36) are 8-nt long i5 and i7 dual index sequences (Table VIII).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|----------------------------|---|---|--|
| 25 | GGTTGAAC | GTTCAACC | CCGTAACT |
| 26 | CCTCGAAT | ATTCGAGG | AACAAGGC |
| 27 | TGGCTACA | TGTAGCCA | TTGCAACG |
| 28 | CAGGTAAG | CTTACCTG | CAATCAGG |
| 29 | GTAAGCAC | GTGCTTAC | GTACACCT |
| 30 | AACACGCT | AGCGTGTT | CGAGTTAG |
| 31 | TTACCGAC | GTCGGTAA | ACAGGCAT |
| 32 | ACCGCTAT | ATAGCGGT | GTTCCATG |
| 33 | CATGAGCA | TGCTCATG | CACGATTC |
| 34 | TGACCGTT | AACGGTCA | CTCTCAGA |
| 35 | ACACTCTG | CAGAGTGT | GAACGAAG |
| 36 | GAGCAATC | GATTGCTC | CATCACGT |

Table VIII. iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-012C-12

Set 012D-12. In the iUDI LACEseq Plate **iUDI Plate LACEseq set 012D – 12, Cat. Number #LS-UDI-012D-12**, the unique dual indexes (37-48) are 8-nt long i5 and i7 dual index sequences (Table IX).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|----------------------------|---|---|--|
| 37 | CAATGCGA | TCGCATTG | CTCGGTAA |
| 38 | CAACTTGG | CCAAGTTG | CCAAGTAG |
| 39 | TCTAGGAG | CTCCTAGA | GGTGTACA |
| 40 | CCAAGGTT | AACCTTGG | CCTGTCAA |
| 41 | CTGGTCAT | ATGACCAG | ACAACGTG |
| 42 | ACCATAGG | CCTATGGT | TGGACCAT |
| 43 | GCCTTAAC | GTTAAGGC | CACATGGT |
| 44 | TATGGCAC | GTGCCATA | AACTTGCC |
| 45 | ACGAATCC | GGATTCGT | CCTCATCT |
| 46 | TCACTCGA | TCGAGTGA | AGTACACG |
| 47 | CAGACGTT | AACGTCTG | CCTACCTA |
| 48 | GTCAACAG | CTGTTGAC | TCAGTAGG |

Table IX. iUDI Plate LACEseq **Unique Dual Index Sequences Cat. Number # LS-UDI-012D-12**

Set Z1-12. In the iUDI LACEseq Plate **iUDI Plate LACEseq set Z1-12, Cat. Number #LS-UDI-012Z1-12**, the unique dual indexes (1-12) are 10-nt long i5 and i7 dual index sequences (Table X).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|---|---|--|
| Z1 | ATGCGCTTAT | ATAAGCGCAT | CTTCGCAACT |
| Z2 | CACTTCACCA | TGGTGAAGTG | CGTCAAGACG |
| Z3 | GGTATAGGGG | CCCCTATACC | TGTCACACTG |
| Z4 | GCAATTCCGC | GCGGAATTGC | AGCCGTAAAG |
| Z5 | AACCGTGTAA | TTACACGGTT | CCACATTGCC |
| Z6 | CTTCACTGCT | AGCAGTGAAG | ACGTCCAAAC |
| Z7 | ACTGCACTAC | GTAGTGCAGT | CTCGAACACT |
| Z8 | GGAACATGGG | CCCATGTTCC | AACCAGAGAA |
| Z9 | CCAGTATCCC | GGGATACTGG | CACCAGTTCA |
| Z10 | AACAGTCCAA | TTGGACTGTT | TTGCGAGATT |
| Z11 | TCGGATTCTC | GAGAATCCGA | ACAAGCTCAC |
| Z12 | CAACGAGTCA | TGACTCGTTG | GATAGCCAGA |

Table X. iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-012Z1-12

Set Z13-24. In the iUDI LACEseq Plate **iUDI Plate LACEseq set Z13-24, Cat. Number #LS-UDI-012Z13-24**, the unique dual indexes (1-12) are 10-nt long i5 and i7 dual index sequences (Table XI).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|---|---|--|
| Z13 | CGCGTATTCG | CGAATACGCG | CAGAACTGCA |
| Z14 | TGGTATCCTG | CAGGATACCA | CAGATCCTCA |
| Z15 | CAAGGTACCA | TGGTACCTTG | ATCCTTCCAT |
| Z16 | ACGGTACAAC | GTTGTACCGT | AGAAGCCTAG |
| Z17 | TCCACGTTTC | GAAACGTGGA | CCTTCCATCC |
| Z18 | ACCTCAGTAC | GTA CTGAGGT | TAGAACGCTA |
| Z19 | ACACGAGAAC | GTTCTCGTGT | AACAGCGAAA |
| Z20 | CACTGTAGCA | TGCTACAGTG | ACCGGTTAAC |
| Z21 | GCGTTAGAGC | GCTCTAACGC | GATCAGACGA |
| Z22 | AACGCCTTAA | TTAAGGCGTT | CACGTCTACA |
| Z23 | ACCATGTCAC | GTGACATGGT | TCGAGAGTTC |
| Z24 | GATCTTGCGA | TCGCAAGATC | ATACTGGCAT |

Table XI. iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-012Z13-24

Set Z25-36. In the iUDI LACEseq Plate **iUDI Plate LACEseq set Z25-36, Cat. Number #LS-UDI-012Z25-36**, the unique dual indexes (1-12) are 8-nt long i5 and i7 dual index sequences (Table XII).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|---|---|--|
| Z25 | CCGTAACTCC | GGAGTTACGG | GGTTGAACGG |
| Z26 | AACAAGGCAA | TTGCCTTGTT | CCTCGAATCC |
| Z27 | TTGCAACGTT | AACGTTGCAA | TGGCTACATG |
| Z28 | CAATCAGGCA | TGCCTGATTG | CAGGTAAGCA |
| Z29 | GTACACCTGT | ACAGGTGTAC | GTAAGCACGT |
| Z30 | CGAGTTAGCG | CGCTAACTCG | AACACGCTAA |
| Z31 | ACAGGCATAC | GTATGCCTGT | TTACCGACTT |
| Z32 | GTTCCATGGT | ACCATGGAAC | ACCGCTATAC |
| Z33 | CACGATTCCA | TGGAATCGTG | CATGAGCACA |
| Z34 | CTCTCAGACT | AGTCTGAGAG | TGACCGTTTG |
| Z35 | GAACGAAGGA | TCCTTCGTTC | ACACTCTGAC |
| Z36 | CATCACGTCA | TGACGTGATG | GAGCAATCGA |

Table XII. iUDI Plate LACEseq *Unique Dual Index Sequences* Cat. Number #LS-UDI-012Z25-36

Set Z37-48. In the iUDI LACEseq Plate **iUDI Plate LACEseq set Z37-48, Cat. Number #LS-UDI-012Z37-48**, the unique dual indexes (1-12) are 8-nt long i5 and i7 dual index sequences (Table XIII).

| IMMAGINA index name | i5 index (HiSeq® 2000/2500 MiSeq®, NextSeq2000, NovaSeq®6000 v1.0) | i5 index (NextSeq®500/550, iSeq, MiniSeq, HiSeq 3000/4000/X, NextSeq 2000 NovaSeq®6000 v1.5) | i7 index (all Illumina systems) |
|--------------------------------|---|---|--|
| Z37 | CTCGGTAACT | AGTTACCGAG | CAATGCGACA |
| Z38 | CCAAGTAGCC | GGCTACTTGG | CAACTTGGCA |
| Z39 | GGTGTACAGG | CCTGTACACC | TCTAGGAGTC |
| Z40 | CCTGTCAACC | GGTTGACAGG | CCAAGGTTCC |
| Z41 | ACAACGTGAC | GTCACGTTGT | CTGGTCATCT |
| Z42 | TGGACCATTG | CAATGGTCCA | ACCATAGGAC |
| Z43 | CACATGGTCA | TGACCATGTG | GCCTTAACGC |
| Z44 | AACTTGCCAA | TTGGCAAGTT | TATGGCACTA |
| Z45 | CCTCATCTCC | GGAGATGAGG | ACGAATCCAC |
| Z46 | AGTACACGAG | CTCGTGTACT | TCACTCGATC |
| Z47 | CCTACCTACC | GGTAGGTAGG | CAGACGTTCA |
| Z48 | TCAGTAGGTC | GACCTACTGA | GTCAACAGGT |

Table XIII. iUDI Plate LACEseq Unique Dual Index Sequences Cat. Number #LS-UDI-012Z37-48

Contacts



Info

info@immaginabiotech.com

Sale support (quoting, ordering and order status update)

orders@immaginabiotech.com

Technical service (technical enquiries and quality complaints)

techsupport@immaginabiotech.com



Via Sommarive, 18, 38123, TRENTO, ITALY



www.immaginabiotech.com



+39 0461312018

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