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# Illumina Adapter Sequences

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# Overview

This resource lists the adapter sequences for Illumina library prep kits.

The library prep kit support pages on the [Illumina support site](#) provide additional resources. These resources include software, training, and compatible products. Always check support pages for the latest versions.

## Index 2 (i5) Orientation

When dual indexing, the orientation of the Index 2 (i5) sequence varies by platform.

MiSeq and HiSeq 2000/2500 i5 adapters:

- Adapters are read in the forward orientation.
- Enter the i5 bases on the sample sheet in the forward orientation.

iSeq 100, MiniSeq, NextSeq 500/550, NextSeq 1000/2000, HiSeq 3000/4000, NovaSeq 6000 (v1.5 reagents), and NovaSeq X/X Plus i5 adapters:

- Adapters are read in the reverse complement orientation.
- If manually creating a sample sheet to be analyzed in bcl2fastq, enter the i5 bases in reverse orientation.
- If using BaseSpace Run Planning, Illumina Experiment Manager, BaseSpace Prep Tab, or Local Run Manager, enter the i5 bases on the sample sheet in forward orientation. The software automatically creates the reverse complement for analysis.
- If using DRAGEN/BCL Convert for NextSeq 1000/2000 or NovaSeq X/X Plus using a manually created v2 sample sheet, enter the i5 bases in forward orientation. DRAGEN/BCL Convert automatically uses the reverse complement for analysis. For all other platforms, use the reverse complement orientation of the i5 sequence.

MiSeq i100 Series i5 adapters:

- For Index First sequencing, adapters are read in the forward orientation.
- For Read First sequencing, adapters are read in the reverse complement orientation.
- If using BaseSpace Run Planning or Illumina Run Manager, enter the i5 bases on the sample sheet in forward orientation. The software automatically creates the reverse complement for analysis for Read First sequencing.
- If using a v2 sample sheet to create a planned run using a DRAGEN application, enter the i5 bases on the sample sheet in forward orientation for both Index First and Read First sequencing. The software automatically creates the reverse complement for analysis for Read First sequencing.

- If using a sample sheet for analysis using a FASTQ generation method (other than DRAGEN/BCL Convert), enter the i5 bases in forward orientation for Index First sequencing and in reverse complement orientation for Read First sequencing.

## Adapter Trimming Sequences

For Illumina kits where adapter trimming is recommended, the sequence of the adapter to be trimmed is listed.

When read length exceeds the DNA insert size, sequences corresponding to the library adapters can be present at the 3' end of the reads. Trimming the adapter sequence from the FASTQ file improves alignment accuracy and performance in secondary analysis. Reads start at the beginning of the DNA insert. Therefore, adapter sequences will not be present at the 5' end of reads.

For Illumina Experiment Manager, BaseSpace Run Planning, BaseSpace Prep Tab, and Local Run Manager, enter the sequence for adapter trimming in the sample sheet generated for Illumina kits. For specific trimming settings, or for guidance on creating custom kits, refer to the software support pages on the [Illumina support site](#).

# Sequences for Nextera, Illumina Prep, and Illumina PCR Kits

This section lists the adapter sequences for Nextera, Illumina Prep, and Illumina PCR Kits.

## Adapter Trimming

The following sequence is used for Read 1 and Read 2 adapter trimming.

CTGTCTCTTATACACATCT

## Illumina DNA PCR-Free Prep, Tagmentation Adapter Trimming

The following sequence includes two adapter sequences joined by a plus sign. When performing adapter trimming, the software independently assesses each adapter for trimming.

CTGTCTCTTATACACATCT+ATGTGTATAAGAGACA

## Nextera Mate Pair Adapter Trimming

The following sequence includes two adapter sequences joined by a plus sign. When performing adapter trimming, the software independently assesses each adapter for trimming.

CTGTCTCTTATACACATCT+AGATGTGTATAAGAGACAG

## Nextera Transposase Adapters

The following transposase adapters are used for Nextera tagmentation.

### Read 1

5' TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG

### Read 2

5' GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG

## PCR Primers

### Index 1 Read

5' CAAGCAGAAGACGGCATACGAGAT [i 7] GTCTCGTGGGCTCGG

### Index 2 Read

5' AATGATAACGGCGACCACCGAGATCTACAC [i 5] TCGTCGGCAGCGTC

# Illumina Unique Dual Indexes

The Illumina Unique Dual (UD) index adapters are arranged in the plate to enforce the recommended pairing strategy. The index adapters are 10 bases long, instead of the typical eight bases.

The Illumina Unique Dual Indexes include the following:

- Illumina DNA/RNA UD Indexes, Tagmentation
- Illumina RNA UD Indexes, Ligation
- Illumina Unique Dual Indexes, LT

## Index 1 (i7) Adapters

CAAGCAGAAGACGGCATACGAGAT [i7] GTCTCGTGGCTCGG

## Index 2 (i5) Adapters

AATGATAACGGCGACCACCGAGATCTACAC [i5] TCGTCGGCAGCGTC

## Set A Index Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0001    | CGCTCAGTTC          | GAAC TGAGCG               | TCGTGGAGCG          | TCGTGGAGCG                                       | CGCTCCACGA  |
| UDP0002    | TATCTGACCT          | AGGT CAGATA               | CTACAAGATA          | CTACAAGATA                                       | TATCTTGATG  |
| UDP0003V3  | TCGGATGTCG          | CGACATCCGA                | TACGTT CATT         | TACGTT CATT                                      | AATGAACGTA  |
| UDP0004    | CTTATGGAAT          | ATTCCATAAG                | TGCCTGGTGG          | TGCCTGGTGG                                       | CCACCAGGCA  |
| UDP0005V3  | TCCTATTGTG          | CACAATAGGA                | TCCATCCGAG          | TCCATCCGAG                                       | CTCGGATGGA  |
| UDP0006    | GCGCGATGTT          | AACATCGCGC                | GTCCACTTGT          | GTCCACTTGT                                       | ACAAGTGGAC  |
| UDP0007    | AGAGCACTAG          | CTAGTGCTCT                | TGGAACAGTA          | TGGAACAGTA                                       | TACTGTTCCA  |
| UDP0008    | TGCCTTGATC          | GATCAAGGCA                | CCTTGTAAAT          | CCTTGTAAAT                                       | ATTAACAAGG  |
| UDP0009    | CTACTCAGTC          | GACTGAGTAG                | GTTGATAGTG          | GTTGATAGTG                                       | CACTATCAAC  |
| UDP0010    | TCGTCTGACT          | AGTCAGACGA                | ACCAGCGACA          | ACCAGCGACA                                       | TGTCGCTGGT  |
| UDP0011    | GAACATACGG          | CCGTATGTTC                | CATACACTGT          | CATACACTGT                                       | ACAGTGTATG  |
| UDP0012    | CCTATGACTC          | GAGTCATAGG                | GTGTGGCGCT          | GTGTGGCGCT                                       | AGGCCACAC   |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0013    | TAATGGCAAG          | CTTGCCATTA                | ATCACGAAGG          | ATCACGAAGG                                       | CCTTCGTGAT  |
| UDP0014    | GTGCCGCTTC          | GAAGCGGCAC                | CGGCTCTACT          | CGGCTCTACT                                       | AGTAGAGCCG  |
| UDP0015    | CGGCAATGGA          | TCCATTGCCG                | GAATGCACGA          | GAATGCACGA                                       | TCGTGCATTC  |
| UDP0016    | GCCGTAACCG          | CGGTTACGGC                | AAGACTATAG          | AAGACTATAG                                       | CTATAGTCTT  |
| UDP0017    | AACCATTCTC          | GAGAATGGTT                | TCGGCAGCAA          | TCGGCAGCAA                                       | TTGCTGCCGA  |
| UDP0018    | GGTTGCCTCT          | AGAGGCAACC                | CTAATGATGG          | CTAATGATGG                                       | CCATCATTAG  |
| UDP0019    | CTAATGATGG          | CCATCATTAG                | GGTTGCCTCT          | GGTTGCCTCT                                       | AGAGGCAACC  |
| UDP0020    | TCGGCCTATC          | GATAAGGCCGA               | CGCACATGGC          | CGCACATGGC                                       | GCCATGTGCG  |
| UDP0021    | AGTCAACCAT          | ATGGTTGACT                | GGCCTGTCCT          | GGCCTGTCCT                                       | AGGACAGGCC  |
| UDP0022    | GAGCGCAATA          | TATTGCGCTC                | CTGTGTTAGG          | CTGTGTTAGG                                       | CCTAACACAG  |
| UDP0023    | AACAAGGCGT          | ACGCCTTGTT                | TAAGGAACGT          | TAAGGAACGT                                       | ACGTTCCCTA  |
| UDP0024    | GTATGTAGAA          | TTCTACATAC                | CTAACTGTAA          | CTAACTGTAA                                       | TTACAGTTAG  |
| UDP0025    | TTCTATGGTT          | AACCATAGAA                | GGCGAGATGG          | GGCGAGATGG                                       | CCATCTGCC   |
| UDP0026    | CCTCGCAACC          | GGTTGCGAGG                | AATAGAGCAA          | AATAGAGCAA                                       | TTGCTCTATT  |
| UDP0027    | TGGATGCTTA          | TAAGCATCCA                | TCAATCCATT          | TCAATCCATT                                       | AATGGATTGA  |
| UDP0028    | ATGTCGTGGT          | ACCACGACAT                | TCGTATGCGG          | TCGTATGCGG                                       | CCGCATACGA  |
| UDP0029    | AGAGTGCAGGC         | GCCGCACTCT                | TCCGACCTCG          | TCCGACCTCG                                       | CGAGGTCAGGA   |
| UDP0030    | TGCCTGGTGG          | CCACCAGGCA                | CTTATGGAAT          | CTTATGGAAT                                       | ATTCCATAAG  |
| UDP0031    | TGCGTGTAC           | GTGACACGCA                | GCTTACGGAC          | GCTTACGGAC                                       | GTCCGTAAGC  |
| UDP0032    | CATACACTGT          | ACAGTGTATG                | GAACATACGG          | GAACATACGG                                       | CCGTATGTT   |
| UDP0033    | CGTATAATCA          | TGATTATACG                | GTGCGATTACA         | GTGCGATTACA                                      | TGTAATCGAC  |
| UDP0034    | TACGCGGCTG          | CAGCCCGTA                 | ACTAGCCGTG          | ACTAGCCGTG                                       | CACGGCTAGT  |
| UDP0035    | GCGAGTTACC          | GGTAACTCGC                | AAGTTGGTGA          | AAGTTGGTGA                                       | TCACCAACTT  |
| UDP0036    | TACGGCCGGT          | ACCGGCCGTA                | TGGCAATATT          | TGGCAATATT                                       | AATATTGCCA  |
| UDP0037    | GTCGATTACA          | TGTAATCGAC                | GATCACCGCG          | GATCACCGCG                                       | CGCGGTGATC  |
| UDP0038    | CTGTCTGCAC          | GTGCAGACAG                | TACCATCCGT          | TACCATCCGT                                       | ACGGATGGTA  |
| UDP0039    | CAGCCGATTG          | CAATCGGCTG                | GCTGTAGGAA          | GCTGTAGGAA                                       | TTCCCTACAGC   |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0040    | TGACTACATA          | TATGTAGTCA                | CGCACTAATG          | CGCACTAATG                                       | CATTAGTGCG  |
| UDP0041    | ATTGCCGAGT          | ACTCGGCAAT                | GACAAC TGAA         | GACAAC TGAA                                      | TTCAGTTGTC  |
| UDP0042    | GCCATTAGAC          | GTCTAATGGC                | AGTGGTCAGG          | AGTGGTCAGG                                       | CCTGACC ACT   |
| UDP0043    | GGCGAGATGG          | CCATCTGCC                 | TTCTATGGTT          | TTCTATGGTT                                       | AACC ATAGAA   |
| UDP0044    | TGGCTCGCAG          | CTGCGAGCCA                | AATCCGGCCA          | AATCCGGCCA                                       | TGGCCGGATT  |
| UDP0045    | TAGAATAACG          | CGTTATTCTA                | CCATAAGGTT          | CCATAAGGTT                                       | AACCTTATGG  |
| UDP0046V3  | TCCATGTTGC          | GCAACATGGA                | CTTGTCTTAA          | CTTGTCTTAA                                       | TTAAGACAAG  |
|            |                     |                           |                     |  |   |
| UDP0047    | TATCCAGGAC          | GTCCTGGATA                | CGGTGGCGAA          | CGGTGGCGAA                                       | TTCGCCACCG  |
| UDP0048    | AGTGCCACTG          | CAGTGGCACT                | TAACAATAGG          | TAACAATAGG                                       | CCTATTGTTA  |
| UDP0049    | GTGCAACACT          | AGTGTGCAC                 | CTGGTACACG          | CTGGTACACG                                       | CGTGTACCA G   |
| UDP0050    | ACATGGTGTC          | GACACCATGT                | TCAACGTGTA          | TCAACGTGTA                                       | TACACGTTGA  |
| UDP0051    | GACAGACAGG          | CCTGTCTGTC                | ACTGTTGTGA          | ACTGTTGTGA                                       | TCACAACAGT  |
| UDP0052    | TCTTACATCA          | TGATGTAAGA                | GTGCGTCCTT          | GTGCGTCCTT                                       | AAGGACGCAC  |
| UDP0053V3  | TACCGAACTA          | TAGTTGGTA                 | CCATGTGTAG          | CCATGTGTAG                                       | CTACACATGG  |
| UDP0054V3  | GTAGTAATAG          | CTATTACTAC                | GAGTCTCTCC          | GAGTCTCTCC                                       | GGAGAGACTC  |
| UDP0055V3  | GGTTATGCTA          | TAGCATAACC                | GCTATGCGCA          | GCTATGCGCA                                       | TGCGCATAGC  |
| UDP0056V3  | ACAATAGAGT          | ACTCTATTGT                | ATCGCATATG          | ATCGCATATG                                       | CATATGCGAT  |
| UDP0057    | TTAGGATAGA          | TCTATCCTAA                | CGTCGACTGG          | CGTCGACTGG                                       | CCAGTCGACG  |
| UDP0058    | CCGAAGCGAG          | CTCGCTCGG                 | TACTAGTCAA          | TACTAGTCAA                                       | TTGACTAGTA  |
| UDP0059    | GGACCAACAG          | CTGTTGGTCC                | ATAGACCGTT          | ATAGACCGTT                                       | AACGGTCTAT  |
| UDP0060    | TTCCAGGTAA          | TTACCTGGAA                | ACAGTTCCAG          | ACAGTTCCAG                                       | CTGGAACTGT  |
| UDP0061    | TGATTAGCCA          | TGGCTAATCA                | AGGCATGTAG          | AGGCATGTAG                                       | CTACATGCCT  |
| UDP0062    | TAACAGTGT           | AACACTGT                  | GCAAGTCTCA          | GCAAGTCTCA                                       | TGAGACTTGC  |
| UDP0063    | ACCGCGCAAT          | ATTGCGCGGT                | TTGGCTCCGC          | TTGGCTCCGC                                       | GC GGAGCCAA   |
| UDP0064    | GTTCGCGCCA          | TGGCGCGAAC                | AACTGATACT          | AACTGATACT                                       | AGTATCAGTT  |
| UDP0065    | AGACACATTA          | TAATGTGTCT                | GTAAGGCATA          | GTAAGGCATA                                       | TATGCCTTAC  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0066    | GCGTTGGTAT          | ATACCAACGC                | AATTGCTGCG          | AATTGCTGCG                                       | CGCAGCAATT  |
| UDP0067    | AGCACATCCT          | AGGATGTGCT                | TTACAATTCC          | TTACAATTCC                                       | GGAATTGTAA  |
| UDP0068    | TTGTTCCGTG          | CACGGAACAA                | AACCTAGCAC          | AACCTAGCAC                                       | GTGCTAGGTT  |
| UDP0069V3  | AAGGCCTTGG          | CCAAGGCCTT                | TCGAAGTACT          | TCGAAGTACT                                       | AGTACTTCGA  |
| UDP0070V3  | TGTGGAGTAA          | TTACTCCACA                | GACACCGATG          | GACACCGATG                                       | CATCGGTGTC  |
| UDP0071V3  | CACTTCTACT          | AGTAGAAGTG                | CTAGCGTCGA          | CTAGCGTCGA                                       | TCGACGCTAG  |
| UDP0072V3  | TGGACTCGTA          | TACGAGTCCA                | TAGCGAAGCA          | TAGCGAAGCA                                       | TGCTTCGCTA  |
| UDP0073V3  | TATCATGAGA          | TCTCATGATA                | AACACGTGGA          | AACACGTGGA                                       | TCCACGTGTT  |
| UDP0074V3  | CTTGGCCTCG          | CGAGGCCAAG                | GTGTTACCGG          | GTGTTACCGG                                       | CCGGTAACAC  |
| UDP0075V3  | GTCTCGTGAA          | TTCACGAGAC                | AGATTGTTAC          | AGATTGTTAC                                       | GTAACAATCT  |
| UDP0076V3  | CCATCCACGC          | GCGTGGATGG                | TTGACCAATG          | TTGACCAATG                                       | CATTGGTCAA  |
| UDP0077    | GGATACCAGA          | TCTGGTATCC                | CGTTGCTTAC          | CGTTGCTTAC                                       | GTAAGCAACG  |
| UDP0078    | CGCACTAATG          | CATTAGTGC                 | TGACTACATA          | TGACTACATA                                       | TATGTAGTCA  |
| UDP0079    | TCCTGACCGT          | ACGGTCAGGA                | CGGCCTCGTT          | CGGCCTCGTT                                       | AACGAGGCCG  |
| UDP0080    | CTGGCTTGCC          | GGCAAGCCAG                | CAAGCATCCG          | CAAGCATCCG                                       | CGGATGCTTG  |
| UDP0081    | ACCAGCGACA          | TGTCGCTGGT                | TCGTCTGACT          | TCGTCTGACT                                       | AGTCAGACGA  |
| UDP0082    | TTGTAACGGT          | ACCGTTACAA                | CTCATAGCGA          | CTCATAGCGA                                       | TCGCTATGAG  |
| UDP0083    | GTAAGGCATA          | TATGCCTTAC                | AGACACATTA          | AGACACATTA                                       | TAATGTGTCT  |
| UDP0084V3  | TAGATCCAGT          | ACTGGATCTA                | TCGCCGCTAG          | TCGCCGCTAG                                       | CTAGCGGCAG  |
| UDP0085    | TTAGGTACCA          | TGGTACCTAA                | CATGAGTACT          | CATGAGTACT                                       | AGTACTCATG  |
| UDP0086    | GGAATTCCAA          | TTGGAATTCC                | ACGTCAATAC          | ACGTCAATAC                                       | GTATTGACGT  |
| UDP0087    | CATGTAGAGG          | CCTCTACATG                | GATACCTCCT          | GATACCTCCT                                       | AGGAGGTATC  |
| UDP0088    | TACACGCTCC          | GGAGCGTGT                 | ATCCGTAAGT          | ATCCGTAAGT                                       | ACTTACGGAT  |
| UDP0089    | GCTTACGGAC          | GTCCGTAAGC                | CGTGTATCTT          | CGTGTATCTT                                       | AAGATACACG  |
| UDP0090    | CGCTTGAAGT          | ACTTCAAGCG                | GAACCATGAA          | GAACCATGAA                                       | TTCATGGTTC  |
| UDP0091    | CGCCTCTGA           | TCAGAAGGCG                | GGCCATCATA          | GGCCATCATA                                       | TATGATGGCC  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0092    | ATACCAACGC          | GCGTTGGTAT                | ACATACTTCC          | ACATACTTCC                                       | GGAAGTATGT  |
| UDP0093    | CTGGATATGT          | ACATATCCAG                | TATGTGCAAT          | TATGTGCAAT                                       | ATTGCACATA  |
| UDP0094    | CAATCTATGA          | TCATAGATTG                | GATTAAGGTG          | GATTAAGGTG                                       | CACCTTAATC  |
| UDP0095    | GGTGGAATAC          | GTATTCCACC                | ATGTAGACAA          | ATGTAGACAA                                       | TTGTCTACAT  |
| UDP0096    | TGGACGGAGG          | CCTCCGTCCA                | CACATCGGTG          | CACATCGGTG                                       | CACCGATGTG  |

## Set B Index Adapters

Refer to [Index 2 \(i5\) Orientation](#) on page 1 for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0097    | CTGACCGGCA          | TGCCGGTCAG                | CCTGATACAA          | CCTGATACAA                                       | TTGTATCAGG  |
| UDP0098    | GAATTGAGTG          | CACTCAATTG                | TTAAGTTGTG          | TTAAGTTGTG                                       | CACAACTTAA  |
| UDP0099    | GCGTGTGAGA          | TCTCACACGC                | CGGACAGTGA          | CGGACAGTGA                                       | TCACTGTCCG  |
| UDP0100    | TCTCCATTGA          | TCAATGGAGA                | GCACTACAAC          | GCACTACAAC                                       | GTTGTAGTGC  |
| UDP0101    | ACATGCATAT          | ATATGCATGT                | TGGTGCCTGG          | TGGTGCCTGG                                       | CCAGGCACCA  |
| UDP0102V3  | TTGAAGCTAG          | CTAGCTCAA                 | TGTGTAAGCT          | TGTGTAAGCT                                       | AGCTTACACA  |
|            |                     |                           |                     |  |   |
| UDP0103    | ACATAACGGA          | TCCGTTATGT                | TTGTAGTGT           | TTGTAGTGT  | TACACTACAA  |
| UDP0104    | TTAATAGACC          | GGTCTATTAA                | CCACGACACG          | CCACGACACG                                       | CGTGTCTGG   |
| UDP0105    | ACGATTGCTG          | CAGCAATCGT                | TGTGATGTAT          | TGTGATGTAT                                       | ATACATCACA  |
| UDP0106    | TTCTACAGAA          | TTCTGTAGAA                | GAGCGCAATA          | GAGCGCAATA                                       | TATTGCGCTC  |
| UDP0107    | TATTGCGTTC          | GAACGCAATA                | ATCTTACTGT          | ATCTTACTGT                                       | ACAGTAAGAT  |
| UDP0108    | CATGAGTACT          | AGTACTCATG                | ATGTCGTGGT          | ATGTCGTGGT                                       | ACCACGACAT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0109    | TAATTCTACC          | GGTAGAATTA                | GTAGCCATCA          | GTAGCCATCA                                       | TGATGGCTAC  |
| UDP0110    | ACGCTAATTA          | TAATTAGCGT                | TGGTTAAGAA          | TGGTTAAGAA                                       | TTCTTAACCA  |
| UDP0111    | CCTTGTAAAT          | ATTAACAAGG                | TGTTGTTCGT          | TGTTGTTCGT                                       | ACGAACAACA  |
| UDP0112    | GTAGCCATCA          | TGATGGCTAC                | CCAACAACAT          | CCAACAACAT                                       | ATGTTGTTGG  |
| UDP0113    | CTTGTAATTC          | GAATTACAAG                | ACCGGCTCAG          | ACCGGCTCAG                                       | CTGAGCCGGT  |
| UDP0114    | TCCAATTCTA          | TAGAATTGGA                | GTTAATCTGA          | GTTAATCTGA                                       | TCAGATTAAC  |
| UDP0115    | AGAGCTGCCT          | AGGCAGCTCT                | CGGCTAACGT          | CGGCTAACGT                                       | ACGTTAGCCG  |
| UDP0116    | CTTCGCCGAT          | ATCGGCGAAG                | TCCAAGAATT          | TCCAAGAATT                                       | AATTCTTGGA  |
| UDP0117    | TCGGTCACGG          | CCGTGACCGA                | CCGAACGTTG          | CCGAACGTTG                                       | CAACGTTCGG  |
| UDP0118    | GAACAAGTAT          | ATACTTGTTC                | TAACCGCCGA          | TAACCGCCGA                                       | TCGGCGGTTA  |
| UDP0119    | AATTGGCGGA          | TCCGCCAATT                | CTCCGTGCTG          | CTCCGTGCTG                                       | CAGCACGGAG  |
| UDP0120    | GGCCTGTCCT          | AGGACAGGCC                | CATTCCAGCT          | CATTCCAGCT                                       | AGCTGGAATG  |
| UDP0121    | TAGGTTCTCT          | AGAGAACCTA                | GGTTATGCTA          | GGTTATGCTA                                       | TAGCATAACC  |
| UDP0122    | ACACAATATC          | GATATTGTGT                | ACCACACGGT          | ACCACACGGT                                       | ACCGTGTGGT  |
| UDP0123    | TTCCTGTACG          | CGTACAGGAA                | TAGGTTCTCT          | TAGGTTCTCT                                       | AGAGAACCTA  |
| UDP0124    | GGTAACGCAG          | CTGCGTTACC                | TATGGCTCGA          | TATGGCTCGA                                       | TCGAGCCATA  |
| UDP0125    | TCCACGGCCT          | AGGCCGTGGA                | CTCGTGCCTT          | CTCGTGCCTT                                       | AACGCACGAG  |
| UDP0126    | GATACCTCCT          | AGGAGGTATC                | CCAGTTGGCA          | CCAGTTGGCA                                       | TGCCAACTGG  |
| UDP0127    | CAACGTCAGC          | GCTGACGTTG                | TGTTCGCATT          | TGTTCGCATT                                       | AATGCGAACAA   |
| UDP0128    | CGGTTATTAG          | CTAATAACCG                | AACCGCATCG          | AACCGCATCG                                       | CGATGCGGTT  |
| UDP0129    | CGGCCCTAGA          | TCTAGGCGCG                | CGAAGGTTAA          | CGAAGGTTAA                                       | TTAACCTTCG  |
| UDP0130    | TCTTGCTAT           | ATAGCCAAGA                | AGTGCCACTG          | AGTGCCACTG                                       | CAGTGGCACT  |
| UDP0131    | TCACACCGAA          | TTCGGTGTGA                | GAACAAGTAT          | GAACAAGTAT                                       | ATACTTGTTC  |
| UDP0132    | AACGTTACAT          | ATGTAACGTT                | ACGATTGCTG          | ACGATTGCTG                                       | CAGCAATCGT  |
| UDP0133    | CGGCCTCGTT          | AACGAGGCCG                | ATACCTGGAT          | ATACCTGGAT                                       | ATCCAGGTAT  |
| UDP0134    | CATAACACCA          | TGGTGTTATG                | TCCAATTCTA          | TCCAATTCTA                                       | TAGAATTGGA  |
| UDP0135    | ACAGAGGCCA          | TGGCCTCTGT                | TGAGACAGCG          | TGAGACAGCG                                       | CGCTGTCTCA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0136    | TGGTGCCTGG          | CCAGGCACCA                | ACGCTAATT           | ACGCTAATT  | TAATTAGCGT  |
| UDP0137    | TAGGAACCGG          | CCGGTTCCCTA               | TATATTGAG           | TATATTGAG  | CTCGAATATA  |
| UDP0138    | AATATTGGCC          | GGCCAATATT                | CGGTCCGATA          | CGGTCCGATA                                       | TATCGGACCG  |
| UDP0139    | ATAGGTATT           | GAATACCTAT                | ACAATAGAGT          | ACAATAGAGT                                       | ACTCTATTGT  |
| UDP0140    | CCTTCACGTA          | TACGTGAAGG                | CGGTTATTAG          | CGGTTATTAG                                       | CTAATAACCG  |
| UDP0141    | GGCCAATAAG          | CTTATTGGCC                | GATAACAAGT          | GATAACAAGT                                       | ACTTGTTATC  |
| UDP0142    | CAGTAGTTGT          | ACAACACTG                 | AGTTATCACA          | AGTTATCACA                                       | TGTGATAACT  |
| UDP0143    | TTCATCCAAC          | GTTGGATGAA                | TTCCAGGTAA          | TTCCAGGTAA                                       | TTACCTGGAA  |
| UDP0144    | CAATTGGATT          | AATCCAATTG                | CATGTAGAGG          | CATGTAGAGG                                       | CCTCTACATG  |
| UDP0145V3  | AACCTAGCAC          | GTGCTAGGTT                | TGAATATTGC          | TGAATATTGC                                       | GCAATATTCA  |
| UDP0146V3  | TGGTCGCTGT          | ACAGCGACCA                | CAGGAGCTCT          | CAGGAGCTCT                                       | AGAGCTCCTG  |
| UDP0147V3  | TCTGTGTGGA          | TCCACACAGA                | TTGTCGGATG          | TTGTCGGATG                                       | CATCCGACAA  |
| UDP0148V3  | CCTAACACTT          | AAGTGTAGG                 | GCTAGTTCCG          | GCTAGTTCCG                                       | CGGAACTAGC  |
| UDP0149    | ATTCAGAACATC        | GATTCTGAAT                | AGCGGTGGAC          | AGCGGTGGAC                                       | GTCCACCGCT  |
| UDP0150    | GTATTCTCTA          | TAGAGAACATC               | TATAGATTG           | TATAGATTG  | CGAACATCTATA  |
| UDP0151    | CCTGATACAA          | TTGTATCAGG                | ACAGAGGCCA          | ACAGAGGCCA                                       | TGGCCTCTGT  |
| UDP0152    | GACCGCTGTG          | CACAGCGGTC                | ATT CCTATTG         | ATT CCTATTG                                      | CAATAGGAAT  |
| UDP0153    | TTCAGCGTGG          | CCACGCTGAA                | TATT CCTCAG         | TATT CCTCAG                                      | CTGAGGAATA  |
| UDP0154    | AACTCCGAAC          | GTTCGGAGTT                | CGCCTCTGA           | CGCCTCTGA  | TCAGAAGGCG  |
| UDP0155V3  | AATACGACAT          | ATGTCGTATT                | TTCTTGCTGG          | TTCTTGCTGG                                       | CCAGCAAGAA  |
| UDP0156    | TGAATATTGC          | GCAATATTCA                | GGCGCCAATT          | GGCGCCAATT                                       | AATTGGCGCC  |
| UDP0157    | CGCAATCTAG          | CTAGATTGCG                | AGATATGGCG          | AGATATGGCG                                       | CGCCATATCT  |
| UDP0158    | AACCGCATCG          | CGATGCGGTT                | CCTGCTTGGT          | CCTGCTTGGT                                       | ACCAAGCAGG  |
| UDP0159    | CTAGTCCGGA          | TCCGGACTAG                | GACGAACAAT          | GACGAACAAT                                       | ATTGTTCGTC  |
| UDP0160    | GCTCCGTCAC          | GTGACGGAGC                | TGGCGGTCCA          | TGGCGGTCCA                                       | TGGACCGCCA  |
| UDP0161    | AGATGGAATT          | AATTCCATCT                | CTTCAGTTAC          | CTTCAGTTAC                                       | GTAACGTGAAG   |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0162    | ACACCGTTAA          | TTAACGGTGT                | TCCTGACCGT          | TCCTGACCGT                                       | ACGGTCAGGA  |
| UDP0163    | GATAACAAGT          | ACTTGTTATC                | CGCGCCTAGA          | CGGCCTAGA  | TCTAGGCGCG  |
| UDP0164    | CTGGTACACG          | CGTGTACCAG                | AGGATAAGTT          | AGGATAAGTT                                       | AACTTATCCT  |
| UDP0165    | CGAAGGTTAA          | TTAACCTTCG                | AGGCCAGACA          | AGGCCAGACA                                       | TGTCTGGCCT  |
| UDP0166    | ATCGCATATG          | CATATGCGAT                | CCTTGAACGG          | CCTTGAACGG                                       | CCGTTCAAGG  |
| UDP0167    | ATCATAGGCT          | AGCCTATGAT                | CACCACCTAC          | CACCACCTAC                                       | GTAAGTGGTG  |
| UDP0168    | GATTGTCATA          | TATGACAATC                | TTGCTTGTAT          | TTGCTTGTAT                                       | ATACAAGCAA  |
| UDP0169    | CCAACAACAT          | ATGTTGTTGG                | CAATCTATGA          | CAATCTATGA                                       | TCATAGATTG  |
| UDP0170    | TTGGTGGTGC          | GCACCACCAA                | TGGTACTGAT          | TGGTACTGAT                                       | ATCAGTACCA  |
| UDP0171    | GCGAACGCCT          | AGGCGTTCGC                | TTCATCCAAC          | TTCATCCAAC                                       | GTTGGATGAA  |
| UDP0172    | CAACCGGAGG          | CCTCCGGTTG                | CATAACACCA          | CATAACACCA                                       | TGGTGTATG   |
| UDP0173    | AGCGGTGGAC          | GTCCACCGCT                | TCCTATTAGC          | TCCTATTAGC                                       | GCTAATAGGA  |
| UDP0174    | GACGAACAAT          | ATTGTTCGTC                | TCTCTAGATT          | TCTCTAGATT                                       | AATCTAGAGA  |
| UDP0175    | CCACTGGTCC          | GGACCAGTGG                | CGCGAGCCTA          | CGCGAGCCTA                                       | TAGGCTCGCG  |
| UDP0176    | TGTTAGAAGG          | CCTTCTAACCA               | GATAAGCTCT          | GATAAGCTCT                                       | AGAGCTTATC  |
| UDP0177    | TATATTCGAG          | CTCGAATATA                | GAGATGTCGA          | GAGATGTCGA                                       | TCGACATCTC  |
| UDP0178    | CGCGACGATC          | GATCGTCGCG                | CTGGATATGT          | CTGGATATGT                                       | ACATATCCAG  |
| UDP0179V3  | GACAGGTCGG          | CCGACCTGTC                | TGCTCATAAC          | TGCTCATAAC                                       | GTTATGAGCA  |
|            |                     |                           |                     |  |   |
| UDP0180    | TGAGACAGCG          | CGCTGTCCTCA               | ATTACTCACC          | ATTACTCACC                                       | GGTGAGTAAT  |
| UDP0181    | TGTTCGCATT          | AATGCGAACAA               | AATTGGCGGA          | AATTGGCGGA                                       | TCCGCCAATT  |
| UDP0182    | TCCAAGAATT          | AATTCTTGGAA               | TTGTCAACTT          | TTGTCAACTT                                       | AAGTTGACAA  |
| UDP0183    | GCTGTAGGAA          | TTCCCTACAGC               | GGCGAATTCT          | GGCGAATTCT                                       | AGAATTGCC   |
| UDP0184    | ATACCTGGAT          | ATCCAGGTAT                | CAACGTCAGC          | CAACGTCAGC                                       | GCTGACGTTG  |
| UDP0185    | GTTGGACCGT          | ACGGTCCAAC                | TCTTACATCA          | TCTTACATCA                                       | TGATGTAAGA  |
| UDP0186    | ACCAAGTTAC          | GTAACTTGGT                | CGCCATACCT          | CGCCATACCT                                       | AGGTATGGCG  |
| UDP0187    | GTGTGGCGCT          | AGGCCACAC                 | CTAATGTCTT          | CTAATGTCTT                                       | AAGACATTAG  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0188    | GGCAGTAGCA          | TGCTACTGCC                | CAACCGGAGG          | CAACCGGAGG                                       | CCTCCGGTTG  |
| UDP0189    | TGCGGTGTTG          | CAACACCGCA                | GGCAGTAGCA          | GGCAGTAGCA                                       | TGCTACTGCC  |
| UDP0190    | GATTAAGGTG          | CACCTTAATC                | TTAGGATAGA          | TTAGGATAGA                                       | TCTATCCTAA  |
| UDP0191    | CAACATTCAA          | TTGAATGTTG                | CGCAATCTAG          | CGCAATCTAG                                       | CTAGATTGCG  |
| UDP0192    | GTGTTACCGG          | CCGGTAACAC                | GAGTTGTACT          | GAGTTGTACT                                       | AGTACAACTC  |

### Set C Index Adapters

Refer to [Index 2 \(i5\) Orientation](#) on page 1 for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0193V3  | CCGTAACGAT          | ATCGTTACGG                | GCTCCGGAAG          | GCTCCGGAAG                                       | CTTCCGGAGC  |
| UDP0194V3  | TGACGTAGGA          | TCCTACGTCA                | TACTTAAGTG          | TACTTAAGTG                                       | CACTTAAGTA  |
| UDP0195V3  | GCGATATAAAC         | GTTATATCGC                | AAGACAAGGA          | AAGACAAGGA                                       | TCCTTGTCTT  |
| UDP0196V3  | GATGGCCAAC          | GTTGGCCATC                | TGACATTCGT          | TGACATTCGT                                       | ACGAATGTCA  |
| UDP0197    | ACAACCAGGA          | TCCTGGTTGT                | CTGACCGGCA          | CTGACCGGCA                                       | TGCCGGTCAG  |
| UDP0198    | AGCAGAAATTA         | TAATTCTGCT                | TCTCATCAAT          | TCTCATCAAT                                       | ATTGATGAGA  |
| UDP0199    | CAGTCGTGCG          | CGCACGACTG                | GGACCAACAG          | GGACCAACAG                                       | CTGTTGGTCC  |
| UDP0200    | GTCTAACCTC          | GAGGTTAGAC                | AATGTATTGC          | AATGTATTGC                                       | GCAATACATT  |
| UDP0201    | GAACTCGGTT          | AACCGAGTTC                | GATCTCTGGA          | GATCTCTGGA                                       | TCCAGAGATC  |
| UDP0202    | AGTTATCACA          | TGTGATAACT                | CAGGCGCCAT          | CAGGCGCCAT                                       | ATGGCGCCTG  |
| UDP0203    | GTAGCATACT          | AGTATGCTAC                | TTAATAGACC          | TTAATAGACC                                       | GGTCTATTAA  |
| UDP0204    | CTTCAGTTAC          | GTAACTGAAG                | GGAGTCGCGA          | GGAGTCGCGA                                       | TCGCGACTCC  |
| UDP0205    | AGTCCGAGGA          | TCCTCGGACT                | AACGCCAGAG          | AACGCCAGAG                                       | CTCTGGCGTT  |
| UDP0206    | ACAGTTCCAG          | CTGGAACTGT                | CGTAATTAAC          | CGTAATTAAC                                       | GTAAATTACG  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0207    | CCGCATATTTC         | GAATATGCGG                | ACGAGACTGA          | ACGAGACTGA                                       | TCAGTCTCGT  |
| UDP0208    | TTATCCGATC          | GATCGGATAA                | GTATCGGCCG          | GTATCGGCCG                                       | CGGCCGATAC  |
| UDP0209    | ATAGTCTAGC          | GCTAGACTAT                | AATACGACAT          | AATACGACAT                                       | ATGTCGTATT  |
| UDP0210    | TATAGTAGCT          | AGCTACTATA                | GTTATATGGC          | GTTATATGGC                                       | GCCATATAAAC   |
| UDP0211    | ACTCCGGTGG          | CCACCGGAGT                | GCCTGCCATG          | GCCTGCCATG                                       | CATGGCAGGC  |
| UDP0212    | GTGCGGTAAG          | CTTACCGCAC                | TAAGACCTAT          | TAAGACCTAT                                       | ATAGGTCTTA  |
| UDP0213    | GATATCCTAA          | TTAGGATATC                | TATACCATGG          | TATACCATGG                                       | CCATGGTATA  |
| UDP0214    | TCGCGTATAA          | TTATAACCGA                | GCCGTCTGTT          | GCCGTCTGTT                                       | AACAGACGGC  |
| UDP0215    | ATTCTAAGCG          | CGCTTAGAAT                | CAGAGTGATA          | CAGAGTGATA                                       | TATCACTCTG  |
| UDP0216    | AGCGCTTCGG          | CCGAAGCGCT                | TGCTAACTAT          | TGCTAACTAT                                       | ATAGTTAGCA  |
| UDP0217    | GTTGATAGTG          | CACTATCAAC                | TCAGTTAACG          | TCAGTTAACG                                       | CATTAACACTGA  |
| UDP0218V3  | TACGTAGATG          | CATCTACGTA                | TGTAATTGAG          | TGTAATTGAG                                       | CTCAATTACA  |
|            |                     |                           |                     |  |   |
| UDP0219    | CTAACTGTAA          | TTACAGTTAG                | ACATGCATAT          | ACATGCATAT                                       | ATATGCATGT  |
| UDP0220    | GCGTACTTAG          | CTAAGTACGC                | AACATACCTA          | AACATACCTA                                       | TAGGTATGTT  |
| UDP0221V3  | TGCGCTCTAG          | CTAGAGCGCA                | GCTTCTAGCA          | GCTTCTAGCA                                       | TGCTAGAACG  |
| UDP0222V3  | GCGTGATCGA          | TCGATCACGC                | CATAGAGCCT          | CATAGAGCCT                                       | AGGCTCTATG  |
| UDP0223V3  | GAGCCAGGTT          | AACCTGGCTC                | TGAGTATGTT          | TGAGTATGTT                                       | AACATACTCA  |
| UDP0224V3  | ACTTCCATAA          | TTATGGAAGT                | GACAATAACA          | GACAATAACA                                       | TGTTATTGTC  |
| UDP0225    | GCTTCCACTA          | TAGTGGAAAGC               | AGTACCTATA          | AGTACCTATA                                       | TATAGGTACT  |
| UDP0226    | AGATATGGCG          | CGCCATATCT                | GACCGGAGAT          | GACCGGAGAT                                       | ATCTCCGGTC  |
| UDP0227V3  | TTGAGGCTGC          | GCAGCCTCAA                | TAAGTGCTAG          | TAAGTGCTAG                                       | CTAGCACTTA  |
|            |                     |                           |                     |  |   |
| UDP0228    | TAGCGCTAGT          | ACTAGCGCTA                | TTACTTCCTC          | TTACTTCCTC                                       | GAGGAAGTAA  |
| UDP0229    | AGTTAAGAGC          | GCTCTTAACT                | CACGTCCACC          | CACGTCCACC                                       | GGTGGACGTG  |
| UDP0230    | CAGATACCAC          | GTGGTATCTG                | GCTACTATCT          | GCTACTATCT                                       | AGATAGTAGC  |
| UDP0231    | ACGGCCGTCA          | TGACGGCCGT                | AGTCAACCAT          | AGTCAACCAT                                       | ATGGTTGACT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0232    | GTAATTACTG          | CAGTAATTAC                | CGAGGCAGGA          | CGAGGCAGGA                                       | TACCGCCTCG  |
| UDP0233    | AAGTCTTGTA          | TACAAGACTT                | CAGGTGTTCA          | CAGGTGTTCA                                       | TGAACACCTG  |
| UDP0234    | GTCACCACAG          | CTGTGGTGAC                | GACAGACAGG          | GACAGACAGG                                       | CCTGTCTGTC  |
| UDP0235    | ATTAGTGGAG          | CTCCACTAAT                | TGTACTTGTT          | TGTACTTGTT                                       | AACAAGTACA  |
| UDP0236    | TGCTAACTAT          | ATAGTTAGCA                | CTCTAAGTAG          | CTCTAAGTAG                                       | CTACTTAGAG  |
| UDP0237    | TAAGACCTAT          | ATAGGTCTTA                | GTCACCACAG          | GTCACCACAG                                       | CTGTGGTGAC  |
| UDP0238    | TGGTTAACGAA         | TTCTTAACCA                | TCTACATACC          | TCTACATACC                                       | GGTATGTAGA  |
| UDP0239    | ACTCTTCCTT          | AAGGAAGAGT                | CACGTTAGGC          | CACGTTAGGC                                       | GCCTAACGTG  |
| UDP0240    | GTCTCCTTCC          | GGAAGGAGAC                | TGGTGAGTCT          | TGGTGAGTCT                                       | AGACTCACCA  |
| UDP0241    | TCCCGCGTTCA         | TGAACCGGA                 | CTTCGAAGGA          | CTTCGAAGGA                                       | TCCTTCGAAG  |
| UDP0242V3  | AGACTCTCTT          | AAGAGAGTCT                | TACGAATCTT          | TACGAATCTT                                       | AAGATTCTGA  |
|            |                     |                           |                     |  |   |
| UDP0243    | GAACCATGAA          | TTCATGGTTC                | GACATTGTCA          | GACATTGTCA                                       | TGACAATGTC  |
| UDP0244V3  | TAGCCGAGAG          | CTCTCGGCTA                | TACCAGATCT          | TACCAGATCT                                       | AGATCTGGTA  |
|            |                     |                           |                     |  |   |
| UDP0245    | TGGTCTAGTG          | CACTAGACCA                | ACTGCCTTAT          | ACTGCCTTAT                                       | ATAAGGCAGT  |
| UDP0246    | AGTGGATAAT          | ATTATCCACT                | TACGCACGTA          | TACGCACGTA                                       | TACGTGCGTA  |
| UDP0247    | GGCACGCCAT          | ATGGCGTGCC                | CGCTTGAAGT          | CGCTTGAAGT                                       | ACTTCAAGCG  |
| UDP0248    | GATCTCTGGA          | TCCAGAGATC                | CTGCACTTCA          | CTGCACTTCA                                       | TGAAGTGCAG  |
| UDP0249    | TGCTGGACAT          | ATGTCCAGCA                | CAGCGGACAA          | CAGCGGACAA                                       | TTGTCCGCTG  |
| UDP0250    | CCGAACGTTG          | CAACGTTCGG                | GGATCCGCAT          | GGATCCGCAT                                       | ATGCGGATCC  |
| UDP0251    | ATTAATACGC          | GCGTATTAAT                | TGCGGTGTTG          | TGCGGTGTTG                                       | CAACACCGCA  |
| UDP0252V2  | CCAGATTCTGG         | CCGAATCTGG                | ATGAATCAAG          | ATGAATCAAG                                       | CTTGATTCTAT   |
| UDP0253    | GGTATTGAGA          | TCTCAATACC                | GACGTTCGCG          | GACGTTCGCG                                       | CGCGAACGTC  |
| UDP0254    | CAAGATGCTT          | AAGCATCTTG                | CATTCAACAA          | CATTCAACAA                                       | TTGTTGAATG  |
| UDP0255    | ACGAGACTGA          | TCAGTCTCGT                | CACGGATTAT          | CACGGATTAT                                       | ATAATCCGTG  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0256V3  | TGTTCTATAC          | GTATAGAAC                 | TGTCACAGGA          | TGTCACAGGA                                       | TCCTGTGACA  |
| UDP0257    | AGATTGTTAC          | GTAACAATCT                | CTCTGTATAC          | CTCTGTATAC                                       | GTATACAGAG  |
| UDP0258V2  | TATACCATGG          | CCATGGTATA                | TCTCGCGGAG          | TCTCGCGGAG                                       | CTCCGCGAGA  |
| UDP0259    | AACGGTATGA          | TCATACCGTT                | GGTAACGCAG          | GGTAACGCAG                                       | CTGCGTTACC  |
| UDP0260    | CAATGGCGCC          | GGCGCCATTG                | ACCGCGCAAT          | ACCGCGCAAT                                       | ATTGCGCGGT  |
| UDP0261    | CTAATTCGCT          | AGCGAATTAG                | AGCCGGAACA          | AGCCGGAACA                                       | TGTTCCGGCT  |
| UDP0262    | CATGGTCTAA          | TTAGACCATG                | TCCTAGGAAG          | TCCTAGGAAG                                       | CTTCCTAGGA  |
| UDP0263    | ATACTGTGTG          | CACACAGTAT                | TTGAGCCTAA          | TTGAGCCTAA                                       | TTAGGCTCAA  |
| UDP0264    | GCCGACAAGA          | TCTTGTGCGC                | CCACCTGTGT          | CCACCTGTGT                                       | ACACAGGTGG  |
| UDP0265V3  | TCTCGGTTAG          | CTAACCGAGA                | TCGATGCGCG          | TCGATGCGCG                                       | CGCGCATCGA  |
| UDP0266V3  | CCTAGACACT          | AGTGTCTAGG                | CCTAGAACGCA         | CCTAGAACGCA                                      | TGCTTCTAGG  |
| UDP0267V3  | GAAGCTCCTC          | GAGGAGCTTC                | GACGTATACA          | GACGTATACA                                       | TGTATACGTC  |
| UDP0268V3  | TAGTAGATGA          | TCATCTACTA                | TAGGCGACTT          | TAGGCGACTT                                       | AAGTCGCCTA  |
| UDP0269    | GCTCGCCTAC          | GTAGGCGAGC                | TAGGAGCGCA          | TAGGAGCGCA                                       | TGCGCTCCTA  |
| UDP0270    | AGGATAAGTT          | AACTTATCCT                | GTACTGGCGT          | GTACTGGCGT                                       | ACGCCAGTAC  |
| UDP0271    | GAGACATAAT          | ATTATGTCTC                | AGTTAACAGAC         | AGTTAACAGAC                                      | GCTCTTAAC   |
| UDP0272    | AGCTGTTATA          | TATAACAGCT                | TCGCGTATAA          | TCGCGTATAA                                       | TTATACGCGA  |
| UDP0273    | GTATCATTGG          | CCAATGATAC                | GAGTGTGCCG          | GAGTGTGCCG                                       | CGGCACACTC  |
| UDP0274    | AATAGGCCTC          | GAGGCCTATT                | CTAGTCCGGA          | CTAGTCCGGA                                       | TCCGGACTAG  |
| UDP0275    | CCGCTTAGCT          | AGCTAACCGG                | ATTAATACGC          | ATTAATACGC                                       | GCGTATTAAT  |
| UDP0276    | TCCTAGGAAG          | CTTCCTAGGA                | CCTAGAGTAT          | CCTAGAGTAT                                       | ATACTCTAGG  |
| UDP0277    | TCACAGATCG          | CGATCTGTGA                | TAGGAAGACT          | TAGGAAGACT                                       | AGTCTTCCTA  |
| UDP0278    | ACTTGTCCAC          | GTGGACAAGT                | CCGTGGCCTT          | CCGTGGCCTT                                       | AAGGCCACGG  |
| UDP0279    | TGTACTTGTT          | AACAAGTACA                | GGATATATCC          | GGATATATCC                                       | GGATATATCC  |
| UDP0280    | CACTTAATCT          | AGATTAAGTG                | CACCTCTTGG          | CACCTCTTGG                                       | CCAAGAGGTG  |
| UDP0281    | CAGAGTGATA          | TATCACTCTG                | AACGTTACAT          | AACGTTACAT                                       | ATGTAACGTT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0282    | GGCGAATTCT          | AGAATTGCC                 | CGGCAAGCTC          | CGGCAAGCTC                                       | GAGCTTGCCG  |
| UDP0283    | AGTGGTCAGG          | CCTGACCACT                | TCTTGGCTAT          | TCTTGGCTAT                                       | ATAGCCAAGA  |
| UDP0284    | CATTCCAGCT          | AGCTGGAATG                | ACGGAATGCG          | ACGGAATGCG                                       | CGCATTCCGT  |
| UDP0285V3  | GATGCCAAGG          | CCTTGGCATC                | GACCGATTG           | GACCGATTG  | CGAATCGGTC  |
| UDP0286V3  | AGTACCTATA          | TATAGGTACT                | TAGGTGAGAT          | TAGGTGAGAT                                       | ATCTCACCTA  |
| UDP0287V3  | TGTAGACTTG          | CAAGTCTACA                | CACGTACGTG          | CACGTACGTG                                       | CACGTACGTG  |
| UDP0288V3  | TCCTCTTCTC          | GAGAAGAGGA                | TTGACCTAAC          | TTGACCTAAC                                       | GTTAGGTCAA  |

## Set D Index Adapters

Refer to [Index 2 \(i5\) Orientation](#) on page 1 for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0289V2  | GCTACTATCT          | AGATAGTAGC                | GGCACGCCAT          | GGCACGCCAT                                       | ATGGCGTGCC  |
| UDP0290V2  | GTCTTCTTAAT         | ATTAGAAGAC                | GCAGGCTGGA          | GCAGGCTGGA                                       | TCCAGCCTGC  |
| UDP0291V2  | ATGTGCGAGC          | GCTCGCACAT                | ATGGCTTAAT          | ATGGCTTAAT                                       | ATTAAGCCAT  |
| UDP0292    | TGGCAATATT          | AATATTGCCA                | CGGTGACACC          | CGGTGACACC                                       | GGTGTACCG   |
| UDP0293    | GAATGCACGA          | TCGTGCATTC                | GCGTTGGTAT          | GCGTTGGTAT                                       | ATACCAACGC  |
| UDP0294    | CGTGTATCTT          | AAGATACACG                | TGTGCTAACAA         | TGTGCTAACAA                                      | TGTTAGCACA  |
| UDP0295    | ATTCATTGCA          | TGCAATGAAT                | CCAGAAAGTAA         | CCAGAAAGTAA                                      | TTACTTCTGG  |
| UDP0296    | TCCTTCATAG          | CTATGAAGGA                | CTTATAACCTG         | CTTATAACCTG                                      | CAGGTATAAG  |
| UDP0297    | TCTAGTCTTC          | GAAGACTAGA                | ACTAGAACTT          | ACTAGAACTT                                       | AAGTTCTAGT  |
| UDP0298V3  | GATAAACCTGG         | CCAGGTTATC                | GAATGCAGTT          | GAATGCAGTT                                       | AACTGCATTC  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0299    | AGTGAGTGAA          | TTCACTCACT                | TATCATGAGA          | TATCATGAGA                                       | TCTCATGATA  |
| UDP0300    | GAAGCGGACC          | GGTCCGCTTC                | CTCACACAAG          | CTCACACAAG                                       | CTTGTGTGAG  |
| UDP0301V2  | CAAGCCACTA          | TAGTGGCTTG                | AGTTACTTGG          | AGTTACTTGG                                       | CCAAGTAAC   |
| UDP0302    | GGACCTCAAT          | ATTGAGGTCC                | CGGATTATAT          | CGGATTATAT                                       | ATATAATCCG  |
| UDP0303    | GAGTCTCTCC          | GGAGAGACTC                | TTGAAGCAGA          | TTGAAGCAGA                                       | TCTGCTCAA   |
| UDP0304    | AACGGAGCGG          | CCGCTCCGTT                | TACGGCGAAG          | TACGGCGAAG                                       | CTTCGCCGTA  |
| UDP0305    | TGTGATGTAT          | ATACATCACA                | TCTCCATTGA          | TCTCCATTGA                                       | TCAATGGAGA  |
| UDP0306    | AACATACCTA          | TAGGTATGTT                | CGAGACCAAG          | CGAGACCAAG                                       | CTTGGTCTCG  |
| UDP0307    | GTGCTAGGTG          | CACCTAGCAC                | TGCTGGACAT          | TGCTGGACAT                                       | ATGCCAGCA   |
| UDP0308    | CATACTTGAA          | TTCAAGTATG                | GATGGTATCG          | GATGGTATCG                                       | CGATACCATC  |
| UDP0309    | CTTGTCTTAA          | TTAACAGACAAG              | GGCTTAATTG          | GGCTTAATTG                                       | CAATTAAGCC  |
| UDP0310    | AAGAGAGGTG          | CACCTCTCTT                | CTCGACTCCT          | CTCGACTCCT                                       | AGGAGTCGAG  |
| UDP0311    | TGCACGAGAA          | TTCTCGTGCA                | ATACACAGAG          | ATACACAGAG                                       | CTCTGTGTAT  |
| UDP0312    | ACTTCCTAGC          | GCTAGGAAGT                | TCTCGGACGA          | TCTCGGACGA                                       | TCGTCCGAGA  |
| UDP0313    | GTGCTATTAA          | TTAATAGCAC                | ACCACGTCTG          | ACCACGTCTG                                       | CAGACGTGGT  |
| UDP0314    | AGCGTGAATG          | CATTCACGCT                | GTTGTACTCA          | GTTGTACTCA                                       | TGAGTACAAC  |
| UDP0315    | CCTTAGTGCC          | GGCACTAAGG                | TCAGGTCAAC          | TCAGGTCAAC                                       | GTTGACCTGA  |
| UDP0316    | TGTACCGAAT          | ATTCCGGTACA               | AGTCCGAGGA          | AGTCCGAGGA                                       | TCCTCGGACT  |
| UDP0317    | GGAGATTAGT          | ACTAATCTCC                | CACTTAATCT          | CACTTAATCT                                       | AGATTAAGTG  |
| UDP0318    | TACTAACACA          | TGTGTTAGTA                | TACTCTGTTA          | TACTCTGTTA                                       | TAACAGAGTA  |
| UDP0319    | TAGGTCGTTG          | CAACGACCTA                | GCGACTCGAT          | GCGACTCGAT                                       | ATCGAGTCGC  |
| UDP0320    | ATGCCGACCG          | CGGTCGGCAT                | CTAGGCAAGG          | CTAGGCAAGG                                       | CCTTGCCTAG  |
| UDP0321V3  | GCGGAGTTAC          | GTAACTCCGC                | AATAGAACGG          | AATAGAACGG                                       | CCGTTCTATT  |
|            |                     |                           |                     |  |   |
| UDP0322    | TGCCTACGAG          | CTCGTAGGCA                | TCATCCTCTT          | TCATCCTCTT                                       | AAGAGGATGA  |
| UDP0323    | ACTAGAACTT          | AAGTTCTAGT                | GGTAAGATAA          | GGTAAGATAA                                       | TTATCTTACC  |
| UDP0324    | CACCTCTTGG          | CCAAGAGGTG                | AACGAGCCAG          | AACGAGCCAG                                       | CTGGCTCGTT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0325    | AAGCAGATAT          | ATATCTGCTT                | TAGACAATCT          | TAGACAATCT                                       | AGATTGTCTA  |
| UDP0326    | GCCAGATCCA          | TGGATCTGGC                | CAATGCTGAA          | CAATGCTGAA                                       | TTCAGCATTG  |
| UDP0327    | TTGGATTCAA          | TTGAATCCAA                | GTCACGGTGT          | GTCACGGTGT                                       | ACACCGTGAC  |
| UDP0328    | ACTAGCCGTG          | CACGGCTAGT                | GGTGTACAAG          | GGTGTACAAG                                       | CTTGTACACC  |
| UDP0329    | CGGCAAGCTC          | GAGCTTGCCG                | AGGTTGCAGG          | AGGTTGCAGG                                       | CCTGCAACCT  |
| UDP0330    | GAAGCTAGCT          | AGCTAGCTTC                | TAATACGGAG          | TAATACGGAG                                       | CTCCGTATT   |
| UDP0331    | ACAAGGATTG          | CAATCCTTGT                | CGAAGACGCA          | CGAAGACGCA                                       | TGCGTCTTCG  |
| UDP0332    | GCAACAGGTG          | CACCTGTTGC                | ATTGACACAT          | ATTGACACAT                                       | ATGTGTCAAT  |
| UDP0333    | CAAGGTGACG          | CGTCACCTTG                | CAGCCGATTG          | CAGCCGATTG                                       | CAATCGGCTG  |
| UDP0334    | ACCAGTCATT          | AATGACTGGT                | TCTCACCGT           | TCTCACCGT  | ACCGTGAGA   |
| UDP0335    | CCGGAATCAT          | ATGATTCCGG                | CTCTGACGTG          | CTCTGACGTG                                       | CACGTCAGAG  |
| UDP0336    | TTGAGCCTAA          | TTAGGCTCAA                | TCGAATGGAA          | TCGAATGGAA                                       | TTCCATTGCA  |
| UDP0337    | CCACCTTACA          | TGTAAGGTGG                | AAGGCCTTGG          | AAGGCCTTGG                                       | CCAAGGCCTT  |
| UDP0338    | GTTGCAGTTG          | CAACTGCAAC                | TGAACGCAAC          | TGAACGCAAC                                       | GTTGCGTTCA  |
| UDP0339    | TCACTCATGT          | ACATGAGTGA                | CCGCTTAGCT          | CCGCTTAGCT                                       | AGCTAACGG   |
| UDP0340    | GACTGGTTGC          | GCAACCAGTC                | CACCGAGGAA          | CACCGAGGAA                                       | TTCCCTGGTG  |
| UDP0341    | ATCGTCGCTC          | GAGCGACGAT                | CGTATAATCA          | CGTATAATCA                                       | TGATTATACG  |
| UDP0342    | GGTGCAGTCG          | CGAACGCCACC               | ATGACAGAAC          | ATGACAGAAC                                       | GTTCTGTCAT  |
| UDP0343    | CGGCGTAAGA          | TCTTACGCCG                | ATTCAATTGCA         | ATTCAATTGCA                                      | TGCAATGAAT  |
| UDP0344    | GACATCAGCT          | AGCTGATGTC                | TCATGTCTG           | TCATGTCTG  | CAGGACATGA  |
| UDP0345    | ACTAATTTCAG         | CTGAATTAGT                | AATTCAATTGCA        | AATTCAATTGCA                                     | CGATCGAATT  |
| UDP0346    | TTCCTCCCTTA         | TAAGGAGGAA                | TTCCGACATT          | TTCCGACATT                                       | AATGTCGGAA  |
| UDP0347    | TGTGTAAGCT          | AGCTTACACA                | TGGCACGACC          | TGGCACGACC                                       | GGTCGTGCCA  |
| UDP0348    | GTGGCTGGTT          | AACCAGCCAC                | GCCACAGCAC          | GCCACAGCAC                                       | GTGCTGTGGC  |
| UDP0349    | TCGACTTAAG          | CTTAAGTCGA                | CAGTAGTTGT          | CAGTAGTTGT                                       | ACAAACTACTG   |
| UDP0350    | CACGTTAGGC          | GCCTAACGTG                | AGCTCTCAAG          | AGCTCTCAAG                                       | CTTGAGAGCT  |
| UDP0351    | TGAAGTAAGT          | ACTTACTTCA                | TCTGGAATTA          | TCTGGAATTA                                       | TAATTCCAGA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0352    | ACGGAATGCG          | CGCATTCCGT                | ATTAGTGGAG          | ATTAGTGGAG                                       | CTCCACTAAT  |
| UDP0353    | GTGTGATATC          | GATATCACAC                | GACTATATGT          | GACTATATGT                                       | ACATATAGTC  |
| UDP0354    | ACACAGCGCT          | AGCGCTGTGT                | CGTCGGAAC           | CGTCGGAAC  | GTTCCGAACG  |
| UDP0355    | AGCGCGGTGA          | TCACCGCGCT                | TCGATACTAG          | TCGATACTAG                                       | CTAGTATCGA  |
| UDP0356    | CAAGGCTATC          | GATAGCCTTG                | TACCACAATG          | TACCACAATG                                       | CATTGTGGTA  |
| UDP0357    | TGCGTCCAGG          | CCTGGACGCA                | TGGTATACCA          | TGGTATACCA                                       | TGGTATACCA  |
| UDP0358    | AGGTGCGTAA          | TTACGCACCT                | GCTCTCGTTG          | GCTCTCGTTG                                       | CAACGAGAGC  |
| UDP0359    | GCAGCAACGA          | TCGTTGCTGC                | GTCTCGTGA           | GTCTCGTGA  | TTCACGAGAC  |
| UDP0360    | ATCCTTGTCG          | CGACAAGGAT                | AAGGCCACCT          | AAGGCCACCT                                       | AGGTGGCCTT  |
| UDP0361    | GAAGGTACAC          | GTGTACCTTC                | CTGTGAGCTA          | CTGTGAGCTA                                       | TAGCTCACAG  |
| UDP0362    | TTGGCCAGGT          | ACCTGGCAA                 | TCACAGATCG          | TCACAGATCG                                       | CGATCTGTGA  |
| UDP0363    | AGGCCAGACA          | TGTCTGGCCT                | AGAACCCAAT          | AGAACCCAAT                                       | ATTGGCTTCT  |
| UDP0364    | AGCATTAAC           | AGTTAATGCT                | ACTGCAGCCG          | ACTGCAGCCG                                       | CGGCTGCAGT  |
| UDP0365    | ATTACTCACC          | GGTGAGTAAT                | AACATCTAGT          | AACATCTAGT                                       | ACTAGATGTT  |
| UDP0366    | GCGCAGAGTA          | TACTCTGCGC                | CCTTACTATG          | CCTTACTATG                                       | CATAGTAAGG  |
| UDP0367    | CGCCATACCT          | AGGTATGGCG                | GTGGCGAGAC          | GTGGCGAGAC                                       | GTCTGCCAC   |
| UDP0368    | GCAGGCTGGA          | TCCAGCCTGC                | GCCAGATCCA          | GCCAGATCCA                                       | TGGATCTGGC  |
| UDP0369V3  | TGAATTCATC          | GATGAATTCA                | TGCTGTGATT          | TGCTGTGATT                                       | AATCACAGCA  |
| UDP0370V3  | GCTGCCGGAT          | ATCCGGCAGC                | GATCGAATAA          | GATCGAATAA                                       | TTATTGATC   |
| UDP0371V3  | CATGGTTCGT          | ACGAACCATG                | ACTGAATTAC          | ACTGAATTAC                                       | GTAATTCACT  |
| UDP0372V3  | TACTGGTTG           | CAACCAAGTA                | CCATCCACGC          | CCATCCACGC                                       | GCCTGGATGG  |
| UDP0373    | TGAACGCAAC          | GTTGC GTTCA               | GTTGCAGTTG          | GTTGCAGTTG                                       | CAACTGCAAC  |
| UDP0374    | GTGGTTGAAG          | CTTCAACCAC                | TTATGCGCCT          | TTATGCGCCT                                       | AGGCGCATAA  |
| UDP0375    | ACTGAATAGA          | TCTATTCACT                | TCTCAGTACA          | TCTCAGTACA                                       | TGTACTGAGA  |
| UDP0376    | GGACGTCTTG          | CAAGACGTCC                | AGTATACGGA          | AGTATACGGA                                       | TCCGTATACT  |
| UDP0377    | GTTGTACTCA          | TGAGTACAAC                | ACGCTTGGAC          | ACGCTTGGAC                                       | GTCCAAGCGT  |
| UDP0378    | AGAACCGCGG          | CCGCGGTTCT                | GGAGTAGATT          | GGAGTAGATT                                       | AATCTACTCC  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0379    | CAGTATCAAT          | ATTGATACTG                | TACACGCTCC          | TACACGCTCC                                       | GGAGCGTGTA  |
| UDP0380    | TCCATAATCC          | GGATTATGGA                | TCCGATAGAG          | TCCGATAGAG                                       | CTCTATCGGA  |
| UDP0381    | ATGAGAACCA          | TGGTTCTCAT                | CTCAAGGCCG          | CTCAAGGCCG                                       | CGGCCTTGAG  |
| UDP0382    | TCGTGGTTGA          | TCAACCACGA                | CAAGTTCATA          | CAAGTTCATA                                       | TATGAACCTG  |
| UDP0383    | CAAGTTCATA          | TATGAACCTG                | AATCCTTAGG          | AATCCTTAGG                                       | CCTAAGGATT  |
| UDP0384    | CTTAACCACT          | AGTGGTTAAG                | GGTGGAATAC          | GGTGGAATAC                                       | GTATTCCACC  |

### Illumina Unique Dual Indexes, LT

The following table depicts the index plate layout for Illumina Unique Dual Indexes, LT.

|   | 1         | 2       | 3       | 4       | 5       | 6       | 7     | 8     | 9     | 10    | 11    | 12    |
|---|-----------|---------|---------|---------|---------|---------|-------|-------|-------|-------|-------|-------|
| A | UDP0289V2 | UDP0105 | UDP0113 | UDP0121 | UDP0129 | UDP0329 | empty | empty | empty | empty | empty | empty |
| B | UDP0290V2 | UDP0106 | UDP0114 | UDP0122 | UDP0130 | UDP0330 | empty | empty | empty | empty | empty | empty |
| C | UDP0291V2 | UDP0107 | UDP0115 | UDP0123 | UDP0131 | UDP0331 | empty | empty | empty | empty | empty | empty |
| D | UDP0292   | UDP0108 | UDP0116 | UDP0124 | UDP0132 | UDP0332 | empty | empty | empty | empty | empty | empty |
| E | UDP0293   | UDP0109 | UDP0117 | UDP0125 | UDP0133 | UDP0333 | empty | empty | empty | empty | empty | empty |
| F | UDP0294   | UDP0110 | UDP0118 | UDP0126 | UDP0134 | UDP0334 | empty | empty | empty | empty | empty | empty |
| G | UDP0295   | UDP0111 | UDP0119 | UDP0127 | UDP0135 | UDP0335 | empty | empty | empty | empty | empty | empty |
| H | UDP0296   | UDP0112 | UDP0120 | UDP0128 | UDP0136 | UDP0336 | empty | empty | empty | empty | empty | empty |

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0105    | ACGATTGCTG          | CAGCAATCGT                | TGTGATGTAT          | TGTGATGTAT                                       | ATACATCACAA   |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0106    | TTCTACAGAA          | TTCTGTAGAA                | GAGCGCAATA          | GAGCGCAATA                                       | TATTGCGCTC  |
| UDP0107    | TATTGCGTTC          | GAACGCAATA                | ATCTTACTGT          | ATCTTACTGT                                       | ACAGTAAGAT  |
| UDP0108    | CATGAGTACT          | AGTACTCATG                | ATGTCGTGGT          | ATGTCGTGGT                                       | ACCACGACAT  |
| UDP0109    | TAATTCTACC          | GGTAGAATTAA               | GTAGCCATCA          | GTAGCCATCA                                       | TGATGGCTAC  |
| UDP0110    | ACGCTAATTA          | TAATTAGCGT                | TGGTTAAGAA          | TGGTTAAGAA                                       | TTCTTAACCA  |
| UDP0111    | CCTTGTAAAT          | ATTAACAAGG                | TGTTGTTCGT          | TGTTGTTCGT                                       | ACGAACAACA  |
| UDP0112    | GTAGCCATCA          | TGATGGCTAC                | CCAACAACAT          | CCAACAACAT                                       | ATGTTGTTGG  |
| UDP0113    | CTTGTAATTTC         | GAATTACAAG                | ACCGGCTCAG          | ACCGGCTCAG                                       | CTGAGCCGGT  |
| UDP0114    | TCCAATTCTA          | TAGAATTGGA                | GTTAATCTGA          | GTTAATCTGA                                       | TCAGATTAAC  |
| UDP0115    | AGAGCTGCCT          | AGGCAGCTCT                | CGGCTAACGT          | CGGCTAACGT                                       | ACGTTAGCCG  |
| UDP0116    | CTTCGCCGAT          | ATCGGCGAAG                | TCCAAGAATT          | TCCAAGAATT                                       | AATTCTTGGA  |
| UDP0117    | TCGGTCACGG          | CCGTGACCGA                | CCGAACGTTG          | CCGAACGTTG                                       | CAACGTTCGG  |
| UDP0118    | GAACAAGTAT          | ATACTTGTTC                | TAACCGCCGA          | TAACCGCCGA                                       | TCGGCGGTTA  |
| UDP0119    | AATTGGCGGA          | TCCGCCAATT                | CTCCGTGCTG          | CTCCGTGCTG                                       | CAGCACGGAG  |
| UDP0120    | GGCCTGTCCT          | AGGACAGGCC                | CATTCCAGCT          | CATTCCAGCT                                       | AGCTGGAATG  |
| UDP0121    | TAGTTCTCT           | AGAGAACCTA                | GGTTATGCTA          | GGTTATGCTA                                       | TAGCATAACC  |
| UDP0122    | ACACAATATC          | GATATTGTGT                | ACCACACGGT          | ACCACACGGT                                       | ACCGTGTGGT  |
| UDP0123    | TTCCGTACG           | CGTACAGGAA                | TAGGTTCTCT          | TAGGTTCTCT                                       | AGAGAACCTA  |
| UDP0124    | GGTAACGCAG          | CTGCGTTACC                | TATGGCTCGA          | TATGGCTCGA                                       | TCGAGCCATA  |
| UDP0125    | TCCACGGCCT          | AGGCCGTGGA                | CTCGTGCCTT          | CTCGTGCCTT                                       | AACGCACGAG  |
| UDP0126    | GATAACCTCCT         | AGGAGGTATC                | CCAGTTGGCA          | CCAGTTGGCA                                       | TGCCAACTGG  |
| UDP0127    | CAACGTCAGC          | GCTGACGTTG                | TGTTCGCATT          | TGTTCGCATT                                       | AATGCGAACAA   |
| UDP0128    | CGGTTATTAG          | CTAATAACCG                | AACCGCATCG          | AACCGCATCG                                       | CGATGCGGTT  |
| UDP0129    | CGCGCCTAGA          | TCTAGGCGCG                | CGAAGGTTAA          | CGAAGGTTAA                                       | TTAACCTTCG  |
| UDP0130    | TCTTGGCTAT          | ATAGCCAAGA                | AGTGCCACTG          | AGTGCCACTG                                       | CAGTGGCACT  |
| UDP0131    | TCACACCGAA          | TTCGGTGTGA                | GAACAAGTAT          | GAACAAGTAT                                       | ATACTTGTTC  |
| UDP0132    | AACGTTACAT          | ATGTAACGTT                | ACGATTGCTG          | ACGATTGCTG                                       | CAGCAATCGT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0133    | CGGCCTCGTT          | AACGAGGCCG                | ATACCTGGAT          | ATACCTGGAT                                       | ATCCAGGTAT  |
| UDP0134    | CATAACACCA          | TGGTGTATG                 | TCCAATTCTA          | TCCAATTCTA                                       | TAGAATTGGA  |
| UDP0135    | ACAGAGGCCA          | TGGCCTCTGT                | TGAGACAGCG          | TGAGACAGCG                                       | CGCTGTCTCA  |
| UDP0136    | TGGTGCCTGG          | CCAGGCACCA                | ACGCTAATTA          | ACGCTAATTA                                       | TAATTAGCGT  |
| UDP0289V2  | GCTACTATCT          | AGATAGTAGC                | GGCACGCCAT          | GGCACGCCAT                                       | ATGGCGTGCC  |
| UDP0290V2  | GTCTTCTAAT          | ATTAGAACAC                | GCAGGCTGGA          | GCAGGCTGGA                                       | TCCAGCCTGC  |
| UDP0291V2  | ATGTGCGAGC          | GCTCGCACAT                | ATGGCTTAAT          | ATGGCTTAAT                                       | ATTAAGCCAT  |
| UDP0292    | TGGCAATATT          | AATATTGCCA                | CGGTGACACC          | CGGTGACACC                                       | GGTGTACCG   |
| UDP0293    | GAATGCACGA          | TCGTGCATTC                | GC GTGGTAT          | GC GTGGTAT                                       | ATACCAACGC  |
| UDP0294    | CGTGTATCTT          | AAGATAACACG               | TGTGCTAAC           | TGTGCTAAC  | TGTTAGCACA  |
| UDP0295    | ATTCAATTGCA         | TGCAATGAAT                | CCAGAAAGTAA         | CCAGAAAGTAA                                      | TTACTTCTGG  |
| UDP0296    | TCCTTCATAG          | CTATGAAGGA                | CTTATACCTG          | CTTATACCTG                                       | CAGGTATAAG  |
| UDP0329    | CGGCAAGCTC          | GAGCTGCCG                 | AGGTTGCAGG          | AGGTTGCAGG                                       | CCTGCAACCT  |
| UDP0330    | GAAGCTAGCT          | AGCTAGCTTC                | TAATACGGAG          | TAATACGGAG                                       | CTCCGTATTA  |
| UDP0331    | ACAAGGATTG          | CAATCCTGT                 | CGAAGACGCA          | CGAAGACGCA                                       | TGCGTCTTCG  |
| UDP0332    | GCAACAGGTG          | CACCTGTTGC                | ATTGACACAT          | ATTGACACAT                                       | ATGTGTCAAT  |
| UDP0333    | CAAGGTGACG          | CGTCACCTTG                | CAGCCGATTG          | CAGCCGATTG                                       | CAATCGGCTG  |
| UDP0334    | ACCAGTCATT          | AATGACTGGT                | TCTCACGCGT          | TCTCACGCGT                                       | ACGCGTGAGA  |
| UDP0335    | CCGGAATCAT          | ATGATTCCGG                | CTCTGACGTG          | CTCTGACGTG                                       | CACGTCAGAG  |
| UDP0336    | TTGAGCCTAA          | TTAGGCTCAA                | TCGAATGGAA          | TCGAATGGAA                                       | TTCCATTGCA  |

## IDT for Illumina UD Indexes

The IDT for Illumina Unique Dual (UD) index adapters are arranged in the plate to enforce the recommended pairing strategy. The index adapters are 10 bases long, instead of the typical eight bases.

The IDT for Illumina UD Indexes include the following:

- IDT for Illumina DNA/RNA UD Indexes
- IDT for Illumina PCR UD Indexes

- IDT for Illumina Nextera DNA UD Indexes

#### Index 1 (i7) Adapters

CAAGCAGAAGACGGCATACGAGAT [i7] GTCTCGTGGCTCGG

#### Index 2 (i5) Adapters

AATGATAACGGCACCACCGAGATCTACAC [i5] TCGTCGGCAGCGTC

#### Plate A/Set 1 Index Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0001    | CGCTCAGTTC          | GAACTGAGCG                | TCGTGGAGCG          | TCGTGGAGCG                                       | CGCTCCACGA  |
| UDP0002    | TATCTGACCT          | AGGTCAGATA                | CTACAAGATA          | CTACAAGATA                                       | TATCTTGTAG  |
| UDP0003    | ATATGAGACG          | CGTCTCATAT                | TATAGTAGCT          | TATAGTAGCT                                       | AGCTACTATA  |
| UDP0004    | CTTATGGAAT          | ATTCCATAAG                | TGCCTGGTGG          | TGCCTGGTGG                                       | CCACCAAGGCA   |
| UDP0005    | TAATCTCGTC          | GACGAGATTA                | ACATTATCCT          | ACATTATCCT                                       | AGGATAATGT  |
| UDP0006    | GCGCGATGTT          | AACATCGCGC                | GTCCACTTGT          | GTCCACTTGT                                       | ACAAGTGGAC  |
| UDP0007    | AGAGCACTAG          | CTAGTGCTCT                | TGGAACAGTA          | TGGAACAGTA                                       | TACTGTTCCA  |
| UDP0008    | TGCCTTGATC          | GATCAAGGCA                | CCTTGTAAAT          | CCTTGTAAAT                                       | ATTAACAAGG  |
| UDP0009    | CTACTCAGTC          | GAUTGAGTAG                | GTTGATAGTG          | GTTGATAGTG                                       | CACTATCAAC  |
| UDP0010    | TCGTCTGACT          | AGTCAGACGA                | ACCAGCGACA          | ACCAGCGACA                                       | TGTCGCTGGT  |
| UDP0011    | GAACATACGG          | CCGTATGTTTC               | CATACACTGT          | CATACACTGT                                       | ACAGTGTATG  |
| UDP0012    | CCTATGACTC          | GAGTCATAGG                | GTGTGGCGCT          | GTGTGGCGCT                                       | AGGCCACAC   |
| UDP0013    | TAATGGCAAG          | CTTGCCTTA                 | ATCACGAAGG          | ATCACGAAGG                                       | CCTCGTGAT   |
| UDP0014    | GTGCCGCTTC          | GAAGCGGCAC                | CGGCTCTACT          | CGGCTCTACT                                       | AGTAGAGCCG  |
| UDP0015    | CGGCAATGGA          | TCCATTGCCG                | GAATGCACGA          | GAATGCACGA                                       | TCGTGCATTC  |
| UDP0016    | GCCGTAACCG          | CGGTTACGGC                | AAGACTATAG          | AAGACTATAG                                       | CTATAGTCTT  |
| UDP0017    | AACCATTCTC          | GAGAATGGTT                | TCGGCAGCAA          | TCGGCAGCAA                                       | TTGCTGCCGA  |
| UDP0018    | GGTTGCCCTCT         | AGAGGCAACC                | CTAATGATGG          | CTAATGATGG                                       | CCATCATTAG  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0019    | CTAATGATGG          | CCATCATTAG                | GGTTGCCTCT          | GGTTGCCTCT                                       | AGAGGCAACC  |
| UDP0020    | TCGGCCTATC          | GATAGGCCGA                | CGCACATGGC          | CGCACATGGC                                       | GCCATGTGCG  |
| UDP0021    | AGTCAACCAT          | ATGGTTGACT                | GGCCTGTCCT          | GGCCTGTCCT                                       | AGGACAGGCC  |
| UDP0022    | GAGCGCAATA          | TATTGCGCTC                | CTGTGTTAGG          | CTGTGTTAGG                                       | CCTAACACAG  |
| UDP0023    | AACAAGGC GT         | ACGCCTTGTT                | TAAGGAACGT          | TAAGGAACGT                                       | ACGTTCCCTTA   |
| UDP0024    | GTATGTAGAA          | TTCTACATAC                | CTAACTGTAA          | CTAACTGTAA                                       | TTACAGTTAG  |
| UDP0025    | TTCTATGGTT          | AACCATAGAA                | GGCGAGATGG          | GGCGAGATGG                                       | CCATCTCGCC  |
| UDP0026    | CCTCGCAACC          | GGTTGCGAGG                | AATAGAGCAA          | AATAGAGCAA                                       | TTGCTCTATT  |
| UDP0027    | TGGATGCTTA          | TAAGCATCCA                | TCAATCCATT          | TCAATCCATT                                       | AATGGATTGA  |
| UDP0028    | ATGTCGTGGT          | ACCACGACAT                | TCGTATGCGG          | TCGTATGCGG                                       | CCGCATACGA  |
| UDP0029    | AGAGTGC GGC         | GCCGCACTCT                | TCCGACCTCG          | TCCGACCTCG                                       | CGAGGTCGGA  |
| UDP0030    | TGCCTGGTGG          | CCACCAGGCA                | CTTATGGAAT          | CTTATGGAAT                                       | ATTCCATAAG  |
| UDP0031    | TGCGTGT CAC         | GTGACACGCA                | GCTTACGGAC          | GCTTACGGAC                                       | GTCCGTAAGC  |
| UDP0032    | CATACACTGT          | ACAGTGTATG                | GAACATACGG          | GAACATACGG                                       | CCGTATGTTC  |
| UDP0033    | CGTATAATCA          | TGATTATA CG               | GTCGATTACA          | GTCGATTACA                                       | TGTAATCGAC  |
| UDP0034    | TACGCGGCTG          | CAGCCGCGTA                | ACTAGCCGTG          | ACTAGCCGTG                                       | CACGGCTAGT  |
| UDP0035    | GCGAGTTACC          | GGTAACTCGC                | AAGTTGGTGA          | AAGTTGGTGA                                       | TCACCAA CTT   |
| UDP0036    | TACGGCCGGT          | ACCGGCCGTA                | TGGCAATATT          | TGGCAATATT                                       | AATATTGCCA  |
| UDP0037    | GTCGATTACA          | TGTAATCGAC                | GATCACCGCG          | GATCACCGCG                                       | CGCGGTGATC  |
| UDP0038    | CTGTCTGCAC          | GTGCAGACAG                | TACCATCCGT          | TACCATCCGT                                       | ACGGATGGTA  |
| UDP0039    | CAGCCGATTG          | CAATCGGCTG                | GCTGTAGGAA          | GCTGTAGGAA                                       | TTCCTACAGC  |
| UDP0040    | TGACTACATA          | TATGTAGTCA                | CGCACTAATG          | CGCACTAATG                                       | CATTAGTGC G   |
| UDP0041    | ATTGCCGAGT          | ACTCGGCAAT                | GACA ACTGAA         | GACA ACTGAA                                      | TTCAGTTGTC  |
| UDP0042    | GCCATTAGAC          | GTCTAATGGC                | AGTGGTCAGG          | AGTGGTCAGG                                       | CCTGACC ACT   |
| UDP0043    | GGCGAGATGG          | CCATCTCGCC                | TTCTATGGTT          | TTCTATGGTT                                       | AACC ATAGAA   |
| UDP0044    | TGGCTCGCAG          | CTGCGAGCCA                | AATCCGGCCA          | AATCCGGCCA                                       | TGGCCGGATT  |
| UDP0045    | TAGAATAACG          | CGTTATTCTA                | CCATAAGGTT          | CCATAAGGTT                                       | AACCTTATGG  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0046    | TAATGGATCT          | AGATCCATT A               | ATCTCTACCA          | ATCTCTACCA                                       | TGGTAGAGAT  |
| UDP0047    | TATCCAGGAC          | GTCCTGGATA                | CGGTGGCGAA          | CGGTGGCGAA                                       | TTCGCCACCG  |
| UDP0048    | AGTGCCACTG          | CAGTGGCACT                | TAACAATAGG          | TAACAATAGG                                       | CCTATTGTTA  |
| UDP0049    | GTGCAACACT          | AGTGTGCAC                 | CTGGTACACG          | CTGGTACACG                                       | CGTGTACCAG  |
| UDP0050    | ACATGGTGTC          | GACACCATGT                | TCAACGTGTA          | TCAACGTGTA                                       | TACACGTTGA  |
| UDP0051    | GACAGACAGG          | CCTGTCTGTC                | ACTGTTGTGA          | ACTGTTGTGA                                       | TCACAACAGT  |
| UDP0052    | TCTTACATCA          | TGATGTAAGA                | GTGCGTCCTT          | GTGCGTCCTT                                       | AAGGACGCAC  |
| UDP0053    | TTACAATTCC          | GGAATTGTAA                | AGCACATCCT          | AGCACATCCT                                       | AGGATGTGCT  |
| UDP0054    | AAGCTTATGC          | GCATAAGCTT                | TTCCGTCGCA          | TTCCGTCGCA                                       | TGCGACGGAA  |
| UDP0055    | TATTCCCTCAG         | CTGAGGAATA                | CTTAACCACT          | CTTAACCACT                                       | AGTGGTTAAG  |
| UDP0056    | CTCGTGC GTT         | AACGCACGAG                | GCCTCGGATA          | GCCTCGGATA                                       | TATCCGAGGC  |
| UDP0057    | TTAGGATAGA          | TCTATCCTAA                | CGTCGACTGG          | CGTCGACTGG                                       | CCAGTCGACG  |
| UDP0058    | CCGAAGCGAG          | CTCGCTTCGG                | TACTAGTCAA          | TACTAGTCAA                                       | TTGACTAGTA  |
| UDP0059    | GGACCAACAG          | CTGTTGGTCC                | ATAGACCGTT          | ATAGACCGTT                                       | AACGGTCTAT  |
| UDP0060    | TTCCAGGTA A         | TTACCTGGAA                | ACAGTTCCAG          | ACAGTTCCAG                                       | CTGGA ACTGT   |
| UDP0061    | TGATTAGCCA          | TGGCTAATCA                | AGGCATGTAG          | AGGCATGTAG                                       | CTACATGCCT  |
| UDP0062    | TAACAGTGT T         | AACACTGTTA                | GCAAGTCTCA          | GCAAGTCTCA                                       | TGAGACTTGC  |
| UDP0063    | ACCGCGCAAT          | ATTGCGCGGT                | TTGGCTCCGC          | TTGGCTCCGC                                       | GC GGAGCCAA   |
| UDP0064    | GTTCGCGCCA          | TGGCGCGAAC                | AACTGATACT          | AACTGATACT                                       | AGTATCAGTT  |
| UDP0065    | AGACACATTA          | TAATGTGTCT                | GTAAGGCATA          | GTAAGGCATA                                       | TATGCCTTAC  |
| UDP0066    | GCGTTGGTAT          | ATACCAAACGC               | AATTGCTGCG          | AATTGCTGCG                                       | CGCAGCAATT  |
| UDP0067    | AGCACATCCT          | AGGATGTGCT                | TTACAATTCC          | TTACAATTCC                                       | GGAATTGTAA  |
| UDP0068    | TTGTTCCGTG          | CACGGAACAA                | AACCTAGCAC          | AACCTAGCAC                                       | GTGCTAGGTT  |
| UDP0069    | AAGTACTCCA          | TGGAGTACTT                | TCTGTGTGGA          | TCTGTGTGGA                                       | TCCACACAGA  |
| UDP0070    | ACGTCAATAC          | GTATTGACGT                | GGAATTCCAA          | GGAATTCCAA                                       | TTGGAATTCC  |
| UDP0071    | GGTGTACAAG          | CTTGTACACC                | AAGCGCGCTT          | AAGCGCGCTT                                       | AAGCGCGCTT  |
| UDP0072    | CCACCTGTGT          | ACACAGGTGG                | TGAGCGTTGT          | TGAGCGTTGT                                       | ACAACGCTCA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0073    | GTTCCGGCAGG         | CCTGCGGAAC                | ATCATAGGCT          | ATCATAGGCT                                       | AGCCTATGAT  |
| UDP0074    | ACCTTATGAA          | TTCATAAGGT                | TGTTAGAAGG          | TGTTAGAAGG                                       | CCTTCTAACAA   |
| UDP0075    | CGCTGCAGAG          | CTCTGCAGCG                | GATGGATGTA          | GATGGATGTA                                       | TACATCCATC  |
| UDP0076    | GTAGAGTCAG          | CTGACTCTAC                | ACGGCCGTCA          | ACGGCCGTCA                                       | TGACGGCCGT  |
| UDP0077    | GGATACCAGA          | TCTGGTATCC                | CGTTGCTTAC          | CGTTGCTTAC                                       | GTAAGCAACG  |
| UDP0078    | CGCACTAATG          | CATTAGTGCG                | TGACTACATA          | TGACTACATA                                       | TATGTAGTCA  |
| UDP0079    | TCCTGACCGT          | ACGGTCAGGA                | CGGCCTCGTT          | CGGCCTCGTT                                       | AACGAGGCCG  |
| UDP0080    | CTGGCTTGCC          | GGCAAGCCAG                | CAAGCATCCG          | CAAGCATCCG                                       | CGGATGCTTG  |
| UDP0081    | ACCAGCGACA          | TGTCGCTGGT                | TCGTCTGACT          | TCGTCTGACT                                       | AGTCAGACGA  |
| UDP0082    | TTGTAACGGT          | ACCGTTACAA                | CTCATAGCGA          | CTCATAGCGA                                       | TCGCTATGAG  |
| UDP0083    | GTAAGGCATA          | TATGCCTTAC                | AGACACATTA          | AGACACATTA                                       | TAATGTGTCT  |
| UDP0084    | GTCCACTTGT          | ACAAGTGGAC                | GCGCGATGTT          | GCGCGATGTT                                       | AACATCGCGC  |
| UDP0085    | TTAGGTACCA          | TGGTACCTAA                | CATGAGTACT          | CATGAGTACT                                       | AGTACTCATG  |
| UDP0086    | GGAATTCCAA          | TTGGAATTCC                | ACGTCAATAAC         | ACGTCAATAAC                                      | GTATTGACGT  |
| UDP0087    | CATGTAGAGG          | CCTCTACATG                | GATACCTCCT          | GATACCTCCT                                       | AGGAGGTATC  |
| UDP0088    | TACACGCTCC          | GGAGCGTGT                 | ATCCGTAAGT          | ATCCGTAAGT                                       | ACTTACGGAT  |
| UDP0089    | GCTTACGGAC          | GTCCGTAAGC                | CGTGTATCTT          | CGTGTATCTT                                       | AAGATACACG  |
| UDP0090    | CGCTTGAAGT          | ACTTCAAGCG                | GAACCATGAA          | GAACCATGAA                                       | TTCATGGTTC  |
| UDP0091    | CGCCTCTGA           | TCAGAAGGCG                | GGCCATCATA          | GGCCATCATA                                       | TATGATGGCC  |
| UDP0092    | ATACCAACGC          | GCGTTGGTAT                | ACATACTTCC          | ACATACTTCC                                       | GGAAGTATGT  |
| UDP0093    | CTGGATATGT          | ACATATCCAG                | TATGTGCAAT          | TATGTGCAAT                                       | ATTGCACATA  |
| UDP0094    | CAATCTATGA          | TCATAGATTG                | GATTAAGGTG          | GATTAAGGTG                                       | CACCTTAATC  |
| UDP0095    | GGTGGAAATAC         | GTATTCCACC                | ATGTAGACAA          | ATGTAGACAA                                       | TTGTCTACAT  |
| UDP0096    | TGGACGGAGG          | CCTCCGTCCA                | CACATCGGTG          | CACATCGGTG                                       | CACCGATGTG  |

## Plate B/Set 2 Index Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0097    | CTGACCGGGCA         | TGCCGGTCAG                | CCTGATACAA          | CCTGATACAA                                       | TTGTATCAGG  |
| UDP0098    | GAATTGAGTG          | CACTCAATTC                | TTAAGTTGTG          | TTAAGTTGTG                                       | CACAACTTAA  |
| UDP0099    | GCGTGTGAGA          | TCTCACACGC                | CGGACAGTGA          | CGGACAGTGA                                       | TCACTGTCCG  |
| UDP0100    | TCTCCATTGA          | TCAATGGAGA                | GCAC TACAAC         | GCAC TACAAC                                      | GTTGTAGTGC  |
| UDP0101    | ACATGCATAT          | ATATGCATGT                | TGGTGCCTGG          | TGGTGCCTGG                                       | CCAGGCACCA  |
| UDP0102    | CAGGCGCCAT          | ATGGCGCCTG                | TCCACGGCCT          | TCCACGGCCT                                       | AGGCCGTGGA  |
| UDP0103    | ACATAACGGA          | TCCGTTATGT                | TTGTAGTGT A         | TTGTAGTGT A                                      | TACACTACAA  |
| UDP0104    | TTAATAGACC          | GGTCTATTAA                | CCACGACACG          | CCACGACACG                                       | CGTGTCTGG   |
| UDP0105    | ACGATTGCTG          | CAGCAATCGT                | TGTGATGTAT          | TGTGATGTAT                                       | ATACATCACA  |
| UDP0106    | TTCTACAGAA          | TTCTGTAGAA                | GAGCGCAATA          | GAGCGCAATA                                       | TATTGCGCTC  |
| UDP0107    | TATTGCGTT C         | GAACGCAATA                | ATCTTACTGT          | ATCTTACTGT                                       | ACAGTAAGAT  |
| UDP0108    | CATGAGTACT          | AGTACTCATG                | ATGTCGTGGT          | ATGTCGTGGT                                       | ACCACGACAT  |
| UDP0109    | TAATTCTACC          | GGTAGAATT A               | GTAGCCATCA          | GTAGCCATCA                                       | TGATGGCTAC  |
| UDP0110    | ACGCTAATTA          | TAATTAGCGT                | TGGTTAAGAA          | TGGTTAAGAA                                       | TTCTTAACCA  |
| UDP0111    | CCTTGTAAAT          | ATTAACAAGG                | TGTTGTTCGT          | TGTTGTTCGT                                       | ACGAACAACA  |
| UDP0112    | GTAGCCATCA          | TGATGGCTAC                | CCAACAACAT          | CCAACAACAT                                       | ATGTTGTTGG  |
| UDP0113    | CTTGTAAATC          | GAATTACAAG                | ACCGGCTCAG          | ACCGGCTCAG                                       | CTGAGCCGGT  |
| UDP0114    | TCCAATTCTA          | TAGAATTGGA                | GTAAATCTGA          | GTAAATCTGA                                       | TCAGATTAAC  |
| UDP0115    | AGAGCTGCCT          | AGGCAGCTCT                | CGGCTAACGT          | CGGCTAACGT                                       | ACGTTAGCCG  |
| UDP0116    | CTTCGCCGAT          | ATCGGCAGAAG               | TCCAAGAATT          | TCCAAGAATT                                       | AATTCTTGG A   |
| UDP0117    | TCGGTCACGG          | CCGTGACCGA                | CCGAACGTTG          | CCGAACGTTG                                       | CAACGTTCGG  |
| UDP0118    | GAACAAGTAT          | ATACTTGTTC                | TAACCGCCGA          | TAACCGCCGA                                       | TCGGCGGTTA  |
| UDP0119    | AATTGGCGGA          | TCCGCCAATT                | CTCCGTGCTG          | CTCCGTGCTG                                       | CAGCACGGAG  |
| UDP0120    | GGCCTGTCCCT         | AGGACAGGCC                | CATTCCAGCT          | CATTCCAGCT                                       | AGCTGGAATG  |
| UDP0121    | TAGGTTCTCT          | AGAGAACCTA                | GGTTATGCTA          | GGTTATGCTA                                       | TAGCATAACC  |
| UDP0122    | ACACAATATC          | GATATTGTGT                | ACCACACGGT          | ACCACACGGT                                       | ACCGTGTGGT  |
| UDP0123    | TTCCCTGTACG         | CGTACAGGAA                | TAGGTTCTCT          | TAGGTTCTCT                                       | AGAGAACCTA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0124    | GGTAACGCAG          | CTGCGTTACC                | TATGGCTCGA          | TATGGCTCGA                                       | TCGAGCCATA  |
| UDP0125    | TCCACGGCCT          | AGGCCGTGGA                | CTCGTGCCTT          | CTCGTGCCTT                                       | AACGCACGAG  |
| UDP0126    | GATACCTCCT          | AGGAGGTATC                | CCAGTTGGCA          | CCAGTTGGCA                                       | TGCCAACTGG  |
| UDP0127    | CAACGTCAGC          | GCTGACGTTG                | TGTTCGCATT          | TGTTCGCATT                                       | AATGCGAACAA   |
| UDP0128    | CGGTTATTAG          | CTAATAACCG                | AACCGCATCG          | AACCGCATCG                                       | CGATGCGGTT  |
| UDP0129    | CGGCCTAGA           | TCTAGGCGCG                | CGAAGGTTAA          | CGAAGGTTAA                                       | TTAACCTTCG  |
| UDP0130    | TCTTGCTAT           | ATAGCCAAGA                | AGTGCCACTG          | AGTGCCACTG                                       | CAGTGGCACT  |
| UDP0131    | TCACACCGAA          | TTCGGTGTGA                | GAACAAGTAT          | GAACAAGTAT                                       | ATACTTGTTC  |
| UDP0132    | AACGTTACAT          | ATGTAACGTT                | ACGATTGCTG          | ACGATTGCTG                                       | CAGCAATCGT  |
| UDP0133    | CGGCCTCGTT          | AACGAGGCCG                | ATACCTGGAT          | ATACCTGGAT                                       | ATCCAGGTAT  |
| UDP0134    | CATAACACCA          | TGGTGTATG                 | TCCAATTCTA          | TCCAATTCTA                                       | TAGAATTGGA  |
| UDP0135    | ACAGAGGCCA          | TGGCCTCTGT                | TGAGACAGCG          | TGAGACAGCG                                       | CGCTGTCTCA  |
| UDP0136    | TGGTGCCTGG          | CCAGGCACCA                | ACGCTAATTA          | ACGCTAATTA                                       | TAATTAGCGT  |
| UDP0137    | TAGGAACCGG          | CCGGTTCCCTA               | TATATTCGAG          | TATATTCGAG                                       | CTCGAATATA  |
| UDP0138    | AATATTGGCC          | GGCCAATATT                | CGGTCCGATA          | CGGTCCGATA                                       | TATCGGACCG  |
| UDP0139    | ATAGGTATTC          | GAATACCTAT                | ACAATAGAGT          | ACAATAGAGT                                       | ACTCTATTGT  |
| UDP0140    | CCTTCACGTA          | TACGTGAAGG                | CGGTTATTAG          | CGGTTATTAG                                       | CTAATAACCG  |
| UDP0141    | GGCCAATAAG          | CTTATTGGCC                | GATAACAAGT          | GATAACAAGT                                       | ACTTGTATTAC   |
| UDP0142    | CAGTAGTTGT          | ACAACACTTG                | AGTTATCACA          | AGTTATCACA                                       | TGTGATAACT  |
| UDP0143    | TTCATCCAAC          | GTTGGATGAA                | TTCCAGGTAA          | TTCCAGGTAA                                       | TTACCTGGAA  |
| UDP0144    | CAATTGGATT          | AATCCAATTG                | CATGTAGAGG          | CATGTAGAGG                                       | CCTCTACATG  |
| UDP0145    | GGCCATCATA          | TATGATGGCC                | GATTGTCATA          | GATTGTCATA                                       | TATGACAATC  |
| UDP0146    | AATTGCTGCG          | CGCAGCAATT                | ATTCCGCTAT          | ATTCCGCTAT                                       | ATAGCGGAAT  |
| UDP0147    | TAAGGAACGT          | ACGTTCCCTA                | GACCGCTGTG          | GACCGCTGTG                                       | CACAGCGGTC  |
| UDP0148    | CTATACGCGG          | CCGCGTATAG                | TAGGAACCGG          | TAGGAACCGG                                       | CCGGTTCCCTA   |
| UDP0149    | ATTCAAGAAC          | GATTCTGAAT                | AGCGGTGGAC          | AGCGGTGGAC                                       | GTCCACCGCT  |
| UDP0150    | GTATTCTCTA          | TAGAGAATAC                | TATAGATTG           | TATAGATTG  | CGAATCTATA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0151    | CCTGATACAA          | TTGTATCAGG                | ACAGAGGCCA          | ACAGAGGCCA                                       | TGGCCTCTGT  |
| UDP0152    | GACCGCTGTG          | CACAGCGGTC                | ATTCCATTG           | ATTCCATTG  | CAATAGGAAT  |
| UDP0153    | TTCAGCGTGG          | CCACGCTGAA                | TATTCCCTAG          | TATTCCCTAG                                       | CTGAGGAATA  |
| UDP0154    | AACTCCGAAC          | GTTCGGAGTT                | CGCCTTCTGA          | CGCCTTCTGA                                       | TCAGAAGGCG  |
| UDP0155    | ATTCCGCTAT          | ATAGCGGAAT                | GCGCAGAGTA          | GCGCAGAGTA                                       | TACTCTGCGC  |
| UDP0156    | TGAATATTGC          | GCAATATTCA                | GGCGCCAATT          | GGCGCCAATT                                       | AATTGGCGCC  |
| UDP0157    | CGCAATCTAG          | CTAGATTGCG                | AGATATGGCG          | AGATATGGCG                                       | CGCCATATCT  |
| UDP0158    | AACCGCATCG          | CGATGCGGTT                | CCTGCTTGGT          | CCTGCTTGGT                                       | ACCAAGCAGG  |
| UDP0159    | CTAGTCCGGA          | TCCGGACTAG                | GACGAACAAT          | GACGAACAAT                                       | ATTGTTCGTC  |
| UDP0160    | GCTCCGTCAC          | GTGACGGAGC                | TGGCGGTCCA          | TGGCGGTCCA                                       | TGGACCGCCA  |
| UDP0161    | AGATGGAATT          | AATTCCATCT                | CTTCAGTTAC          | CTTCAGTTAC                                       | GTAACTGAAG  |
| UDP0162    | ACACCGTTAA          | TTAACGGTGT                | TCCTGACCCT          | TCCTGACCCT                                       | ACGGTCAGGA  |
| UDP0163    | GATAACAAGT          | ACTTGTTATC                | CGCGCCTAGA          | CGCGCCTAGA                                       | TCTAGGCGCG  |
| UDP0164    | CTGGTACACG          | CGTGTACCAAG               | AGGATAAGTT          | AGGATAAGTT                                       | AACTTATCCT  |
| UDP0165    | CGAAGGTTAA          | TTAACCTTCG                | AGGCCAGACA          | AGGCCAGACA                                       | TGTCTGGCCT  |
| UDP0166    | ATCGCATATG          | CATATGCGAT                | CCTTGAACGG          | CCTTGAACGG                                       | CCGTTCAAGG  |
| UDP0167    | ATCATAGGCT          | AGCCTATGAT                | CACCAACCTAC         | CACCAACCTAC                                      | GTAGGTGGTG  |
| UDP0168    | GATTGTCATA          | TATGACAATC                | TTGCTTGTAT          | TTGCTTGTAT                                       | ATACAAGCAA  |
| UDP0169    | CCAACAACAT          | ATGTTGTTGG                | CAATCTATGA          | CAATCTATGA                                       | TCATAGATTG  |
| UDP0170    | TTGGTGGTGC          | GCACCACCAA                | TGGTACTGAT          | TGGTACTGAT                                       | ATCAGTACCA  |
| UDP0171    | GCGAACGCCCT         | AGGCCTTCGC                | TTCATCCAAC          | TTCATCCAAC                                       | GTTGGATGAA  |
| UDP0172    | CAACCGGAGG          | CCTCCGGTTG                | CATAACACCA          | CATAACACCA                                       | TGGTGTATG   |
| UDP0173    | AGCGGTGGAC          | GTCCACCGCT                | TCCTATTAGC          | TCCTATTAGC                                       | GCTAATAGGA  |
| UDP0174    | GACGAACAAT          | ATTGTTCGTC                | TCTCTAGATT          | TCTCTAGATT                                       | AATCTAGAGA  |
| UDP0175    | CCACTGGTCC          | GGACCAGTGG                | CGCGAGCCTA          | CGCGAGCCTA                                       | TAGGCTCGCG  |
| UDP0176    | TGTTAGAAGG          | CCTTCTAACAA               | GATAAGCTCT          | GATAAGCTCT                                       | AGAGCTTATC  |
| UDP0177    | TATATTCGAG          | CTCGAATATA                | GAGATGTCGA          | GAGATGTCGA                                       | TCGACATCTC  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0178    | CGCGACGATC          | GATCGTCGCG                | CTGGATATGT          | CTGGATATGT                                       | ACATATCCAG  |
| UDP0179    | GCCTCGGATA          | TATCCGAGGC                | GGCCAATAAG          | GGCCAATAAG                                       | CTTATTGGCC  |
| UDP0180    | TGAGACAGCG          | CGCTGTCTCA                | ATTACTCACC          | ATTACTCACC                                       | GGTGAGTAAT  |
| UDP0181    | TGTTCGCATT          | AATGCGAACAA               | AATTGGCGGA          | AATTGGCGGA                                       | TCCGCCAATT  |
| UDP0182    | TCCAAGAATT          | AATTCTTGGAA               | TTGTCAACTT          | TTGTCAACTT                                       | AAGTTGACAA  |
| UDP0183    | GCTGTAGGAA          | TTCCTACAGC                | GGCGAATTCT          | GGCGAATTCT                                       | AGAATTGC  |
| UDP0184    | ATACCTGGAT          | ATCCAGGTAT                | CAACGTCAGC          | CAACGTCAGC                                       | GCTGACGTTG  |
| UDP0185    | GTTGGACCGT          | ACGGTCCAAC                | TCTTACATCA          | TCTTACATCA                                       | TGATGTAAGA  |
| UDP0186    | ACCAAGTTAC          | GTAACTTGGT                | CGCCATACCT          | CGCCATACCT                                       | AGGTATGGCG  |
| UDP0187    | GTGTGGCGCT          | AGCGCCACAC                | CTAATGTCTT          | CTAATGTCTT                                       | AAGACATTAG  |
| UDP0188    | GGCAGTAGCA          | TGCTACTGCC                | CAACCGGAGG          | CAACCGGAGG                                       | CCTCCGGTTG  |
| UDP0189    | TGCGGTGTTG          | CAACACCGCA                | GGCAGTAGCA          | GGCAGTAGCA                                       | TGCTACTGCC  |
| UDP0190    | GATTAAGGTG          | CACCTTAATC                | TTAGGATAGA          | TTAGGATAGA                                       | TCTATCCTAA  |
| UDP0191    | CAACATTCAA          | TTGAATGTTG                | CGCAATCTAG          | CGCAATCTAG                                       | CTAGATTGCG  |
| UDP0192    | GTGTTACCGG          | CCGGTAACAC                | GAGTTGTACT          | GAGTTGTACT                                       | AGTACAACTC  |

### Plate C/Set 3 Index Adapters

IDT for Illumina DNA/RNA and PCR UD Indexes are identical to IDT for Illumina Nextera DNA UD Indexes except where a V2 is indicated.

The V2 indication applies only to IDT for Illumina DNA/RNA and PCR UD Indexes. IDT for Illumina Nextera DNA UD Indexes do not include V2 indexes.

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0193    | TATCATGAGA          | TCTCATGATA                | AACACGTGGA          | AACACGTGGA                                       | TCCACGTGTT  |
| UDP0194    | CTTGGCCTCG          | CGAGGCCAAG                | GTGTTACCGG          | GTGTTACCGG                                       | CCGGTAACAC  |
| UDP0195    | GTCTCGTGAA          | TTCACGAGAC                | AGATTGTTAC          | AGATTGTTAC                                       | GTAACAATCT  |
| UDP0196    | CCATCCACGC          | GCGTGGATGG                | TTGACCAATG          | TTGACCAATG                                       | CATTGGTCAA  |
| UDP0197    | ACAACCAGGA          | TCCTGGTTGT                | CTGACCGGCA          | CTGACCGGCA                                       | TGCCGGTCAG  |
| UDP0198    | AGCAGAATTAA         | TAATTCTGCT                | TCTCATCAAT          | TCTCATCAAT                                       | ATTGATGAGA  |
| UDP0199    | CAGTCGTGCG          | CGCACGACTG                | GGACCAACAG          | GGACCAACAG                                       | CTGTTGGTCC  |
| UDP0200    | GTCTAACCTC          | GAGGTTAGAC                | AATGTATTGC          | AATGTATTGC                                       | GCAATACATT  |
| UDP0201    | GAACTCGGTT          | AACCGAGTTC                | GATCTCTGGA          | GATCTCTGGA                                       | TCCAGAGATC  |
| UDP0202    | AGTTATCACA          | TGTGATAACT                | CAGGCGCCAT          | CAGGCGCCAT                                       | ATGGCGCCTG  |
| UDP0203    | GTAGCATACT          | AGTATGCTAC                | TTAATAGACC          | TTAATAGACC                                       | GGTCTATTAA  |
| UDP0204    | CTTCAGTTAC          | GTAACTGAAG                | GGAGTCGCGA          | GGAGTCGCGA                                       | TCGCGACTCC  |
| UDP0205    | AGTCCGAGGA          | TCCTCGGACT                | AACGCCAGAG          | AACGCCAGAG                                       | CTCTGGCGTT  |
| UDP0206    | ACAGTTCCAG          | CTGGAACTGT                | CGTAATTAAC          | CGTAATTAAC                                       | GTAAATTACG  |
| UDP0207    | CCGCATATTG          | GAATATGCGG                | ACGAGACTGA          | ACGAGACTGA                                       | TCAGTCTCGT  |
| UDP0208    | TTATCCGATC          | GATCGGATAA                | GTATCGGCCG          | GTATCGGCCG                                       | CGGCCGATAC  |
| UDP0209    | ATAGTCTAGC          | GCTAGACTAT                | AATACGACAT          | AATACGACAT                                       | ATGTCGTATT  |
| UDP0210    | TATAGTAGCT          | AGCTACTATA                | GTTATATGGC          | GTTATATGGC                                       | GCCATATAAC  |
| UDP0211    | ACTCCGGTGG          | CCACCGGAGT                | GCCTGCCATG          | GCCTGCCATG                                       | CATGGCAGGC  |
| UDP0212    | GTGCGGTAAG          | CTTACCGCAC                | TAAGACCTAT          | TAAGACCTAT                                       | ATAGGTCTTA  |
| UDP0213    | GATATCCTAA          | TTAGGATATC                | TATACCATGG          | TATACCATGG                                       | CCATGGTATA  |
| UDP0214    | TCGCGTATAA          | TTATACCGCA                | GCCGTCTGTT          | GCCGTCTGTT                                       | AACAGACGGC  |
| UDP0215    | ATTCTAAGCG          | CGCTTAGAAT                | CAGAGTGATA          | CAGAGTGATA                                       | TATCACTCTG  |
| UDP0216    | AGCGCTTCGG          | CCGAAGCGCT                | TGCTAACTAT          | TGCTAACTAT                                       | ATAGTTAGCA  |
| UDP0217    | GTTGATAGTG          | CACTATCAAC                | TCAGTTAATG          | TCAGTTAATG                                       | CATTAACTGA  |
| UDP0218    | AATAGAGCAA          | TTGCTCTATT                | GTGACCTTGA          | GTGACCTTGA                                       | TCAAGGTCAC  |
| UDP0219    | CTAACTGTAA          | TTACAGTTAG                | ACATGCATAT          | ACATGCATAT                                       | ATATGCATGT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0220    | GCGTACTTAG          | CTAAGTACGC                | AACATACCTA          | AACATACCTA                                       | TAGGTATGTT  |
| UDP0221    | TACCGAACTA          | TAGTCGGTA                 | CCATGTGTAG          | CCATGTGTAG                                       | CTACACATGG  |
| UDP0222    | GTAGTAATAG          | CTATTACTAC                | GAGTCTCTCC          | GAGTCTCTCC                                       | GGAGAGACTC  |
| UDP0223    | GGTTATGCTA          | TAGCATAACC                | GCTATGCGCA          | GCTATGCGCA                                       | TGCGCATAGC  |
| UDP0224    | ACAATAGAGT          | ACTCTATTGT                | ATCGCATATG          | ATCGCATATG                                       | CATATGCGAT  |
| UDP0225    | GCTTCCACTA          | TAGTGGAAAGC               | AGTACCTATA          | AGTACCTATA                                       | TATAGGTACT  |
| UDP0226    | AGATATGGCG          | CGCCATATCT                | GACCGGAGAT          | GACCGGAGAT                                       | ATCTCCGGTC  |
| UDP0227    | AATATGAAGC          | GCTTCATATT                | CGTTCAGCCT          | CGTTCAGCCT                                       | AGGCTGAACG  |
| UDP0228    | TAGCGCTAGT          | ACTAGCGCTA                | TTACTTCCTC          | TTACTTCCTC                                       | GAGGAAGTAA  |
| UDP0229    | AGTTAAGAGC          | GCTCTTAACT                | CACGTCCACC          | CACGTCCACC                                       | GGTGGACGTG  |
| UDP0230    | CAGATACCAC          | GTGGTATCTG                | GCTACTATCT          | GCTACTATCT                                       | AGATAGTAGC  |
| UDP0231    | ACGGCCGTCA          | TGACGGCCGT                | AGTCAACCAT          | AGTCAACCAT                                       | ATGGTTGACT  |
| UDP0232    | GTAATTACTG          | CAGTAATTAC                | CGAGGCGGTA          | CGAGGCGGTA                                       | TACCGCCTCG  |
| UDP0233    | AAGTCTTGTA          | TACAAGACTT                | CAGGTGTTCA          | CAGGTGTTCA                                       | TGAACACCTG  |
| UDP0234    | GTCACCACAG          | CTGTGGTGAC                | GACAGACAGG          | GACAGACAGG                                       | CCTGTCTGTC  |
| UDP0235    | ATTAGTGGAG          | CTCCACTAAT                | TGTACTTGTT          | TGTACTTGTT                                       | AACAAGTACA  |
| UDP0236    | TGCTAACTAT          | ATAGTTAGCA                | CTCTAAGTAG          | CTCTAAGTAG                                       | CTACTTAGAG  |
| UDP0237    | TAAGACCTAT          | ATAGGTCTTA                | GTCACCACAG          | GTCACCACAG                                       | CTGTGGTGAC  |
| UDP0238    | TGGTTAAGAA          | TTCTTAACCA                | TCTACATACC          | TCTACATACC                                       | GGTATGTAGA  |
| UDP0239    | ACTCTCCTT           | AAGGAAGAGT                | CACGTTAGGC          | CACGTTAGGC                                       | GCCTAACGTG  |
| UDP0240    | GTCTCCTTCC          | GGAAAGGAGAC               | TGGTGAGTCT          | TGGTGAGTCT                                       | AGACTCACCA  |
| UDP0241    | TCCGCGTTCA          | TGAACGCGGA                | CTTCGAAGGA          | CTTCGAAGGA                                       | TCCTCGAAG   |
| UDP0242    | AGGTTGCAGG          | CCTGCAACCT                | GTAGAGTCAG          | GTAGAGTCAG                                       | CTGACTCTAC  |
| UDP0243    | GAACCATGAA          | TTCATGGTTC                | GACATTGTCA          | GACATTGTCA                                       | TGACAATGTC  |
| UDP0244    | TTGAGAGGAT          | ATCCTCTCAA                | TCCGCAAGGC          | TCCGCAAGGC                                       | GCCTTGCAGGA   |
| UDP0245    | TGGTCTAGTG          | CACTAGACCA                | ACTGCCTTAT          | ACTGCCTTAT                                       | ATAAGGCAGT  |
| UDP0246    | AGTGGATAAT          | ATTATCCACT                | TACGCACGTA          | TACGCACGTA                                       | TACGTGCGTA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0247    | GGCACGCCAT          | ATGGCGTGCC                | CGCTTGAAGT          | CGCTTGAAGT                                       | ACTTCAAGCG  |
| UDP0248    | GATCTCTGGA          | TCCAGAGATC                | CTGCACTTCA          | CTGCACTTCA                                       | TGAAGTGCAG  |
| UDP0249    | TGCTGGACAT          | ATGTCCAGCA                | CAGCGGACAA          | CAGCGGACAA                                       | TTGTCCGCTG  |
| UDP0250    | CCGAACGTTG          | CAACGTTCGG                | GGATCCGCAT          | GGATCCGCAT                                       | ATGCGGATCC  |
| UDP0251    | ATTAATACGC          | GCGTATTAAT                | TGCGGTGTTG          | TGCGGTGTTG                                       | CAACACCGCA  |
| UDP0252V2  | CCAGATTCGG          | CCGAATCTGG                | ATGAATCAAG          | ATGAATCAAG                                       | CTTGATTCAT  |
| UDP0252    | TAGTCACAAC          | GTTGTGACTA                | ACATAACGGA          | ACATAACGGA                                       | TCCGTTATGT  |
| UDP0253    | GGTATTGAGA          | TCTCAATACC                | GACGTTCGCG          | GACGTTCGCG                                       | CGCGAACGTC  |
| UDP0254    | CAAGATGCTT          | AAGCATCTTG                | CATTCAACAA          | CATTCAACAA                                       | TTGTTGAATG  |
| UDP0255    | ACGAGACTGA          | TCAGTCTCGT                | CACGGATTAT          | CACGGATTAT                                       | ATAATCCGTG  |
| UDP0256    | TTATCTTGCA          | TGCAAGATAA                | TTGAGGACGG          | TTGAGGACGG                                       | CCGTCCTCAA  |
| UDP0257    | AGATTGTTAC          | GTAACAATCT                | CTCTGTATAC          | CTCTGTATAC                                       | GTATACAGAG  |
| UDP0258V2  | TATACCATGG          | CCATGGTATA                | TCTCGCGGAG          | TCTCGCGGAG                                       | CTCCGCGAGA  |
| UDP0258    | TCTACCGCTG          | CAGCGGTAGA                | GCAACAGGTG          | GCAACAGGTG                                       | CACCTGTTGC  |
| UDP0259    | AACGGTATGA          | TCATACCGTT                | GGTAACGCAG          | GGTAACGCAG                                       | CTGCGTTACC  |
| UDP0260    | CAATGGCGCC          | GGCGCCATTG                | ACCGCGCAAT          | ACCGCGCAAT                                       | ATTGCGCGGT  |
| UDP0261    | CTAATTGCGT          | AGCGAATTAG                | AGCCGGAACA          | AGCCGGAACA                                       | TGTTCCGGCT  |
| UDP0262    | CATGGTCTAA          | TTAGACCATG                | TCCTAGGAAG          | TCCTAGGAAG                                       | CTTCCTAGGA  |
| UDP0263    | ATACTGTGTG          | CACACAGTAT                | TTGAGCCTAA          | TTGAGCCTAA                                       | TTAGGCTCAA  |
| UDP0264    | GCCGACAAGA          | TCTTGT CGGC               | CCACCTGTGT          | CCACCTGTGT                                       | ACACAGGTGG  |
| UDP0265    | CGAGGGCGTA          | TACCGCCTCG                | CCTCGCAACC          | CCTCGCAACC                                       | GGTTGCGAGG  |
| UDP0266    | GATATAACAG          | CTGTTATATC                | GTATAGCTGT          | GTATAGCTGT                                       | ACAGCTATAC  |
| UDP0267    | TCGCCGGTTA          | TAACCGCGA                 | GCTACATTAG          | GCTACATTAG                                       | CTAATGTAGC  |
| UDP0268    | AGACTCTCTT          | AAGAGAGTCT                | TACGAATCTT          | TACGAATCTT                                       | AAGATTGCTA  |
| UDP0269    | GCTCGCCTAC          | GTAGGCGAGC                | TAGGAGCGCA          | TAGGAGCGCA                                       | TGCGCTCCTA  |
| UDP0270    | AGGATAAGTT          | AACTTATCCT                | GTACTGGCGT          | GTACTGGCGT                                       | ACGCCAGTAC  |
| UDP0271    | GAGACATAAT          | ATTATGTCTC                | AGTTAAGAGC          | AGTTAAGAGC                                       | GCTCTTAACT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0272    | AGCTGTTATA          | TATAACAGCT                | TCGCGTATAA          | TCGCGTATAA                                       | TTATACGCGA  |
| UDP0273    | GTATCATTGG          | CCAATGATAC                | GAGTGTGCCG          | GAGTGTGCCG                                       | CGGCACACTC  |
| UDP0274    | AATAGGCCTC          | GAGGCCTATT                | CTAGTCCGGA          | CTAGTCCGGA                                       | TCCGGACTAG  |
| UDP0275    | CCGCTTAGCT          | AGCTAACGCG                | ATTAATACGC          | ATTAATACGC                                       | GCGTATTAAT  |
| UDP0276    | TCCTAGGAAG          | CTTCCTAGGA                | CCTAGAGTAT          | CCTAGAGTAT                                       | ATACTCTAGG  |
| UDP0277    | TCACAGATCG          | CGATCTGTGA                | TAGGAAGACT          | TAGGAAGACT                                       | AGTCTTCCTA  |
| UDP0278    | ACTTGTCCAC          | GTGGACAAGT                | CCGTGGCCTT          | CCGTGGCCTT                                       | AAGGCCACGG  |
| UDP0279    | TGTACTTGTT          | AACAAGTACA                | GGATATATCC          | GGATATATCC                                       | GGATATATCC  |
| UDP0280    | CACTTAATCT          | AGATTAAGTG                | CACCTCTTGG          | CACCTCTTGG                                       | CCAAGAGGTG  |
| UDP0281    | CAGAGTGATA          | TATCACTCTG                | AACGTTACAT          | AACGTTACAT                                       | ATGTAACGTT  |
| UDP0282    | GGCGAATTCT          | AGAATTCGCC                | CGGCAAGCTC          | CGGCAAGCTC                                       | GAGCTTGCCG  |
| UDP0283    | AGTGGTCAGG          | CCTGACCACT                | TCTTGGCTAT          | TCTTGGCTAT                                       | ATAGCCAAGA  |
| UDP0284    | CATTCCAGCT          | AGCTGGAATG                | ACGGAATGCG          | ACGGAATGCG                                       | CGCATTCCGT  |
| UDP0285    | CTCGTTATCA          | TGATAACGAG                | GTTCCGCAGG          | GTTCCGCAGG                                       | CCTGCGGAAC  |
| UDP0286    | CCTTACTATG          | CATAGTAAGG                | ACCAAGTTAC          | ACCAAGTTAC                                       | GTAACTTGGT  |
| UDP0287    | AGAAGCCAAT          | ATTGGCTTCT                | TGGCTCGCAG          | TGGCTCGCAG                                       | CTGCGAGCCA  |
| UDP0288    | TAATCGGTAC          | GTACCGATTA                | AACTAACGTT          | AACTAACGTT                                       | AACGTTAGTT  |

## Plate D/Set 4 Index Adapters

IDT for Illumina DNA/RNA and PCR UD Indexes are identical to IDT for Illumina Nextera DNA UD Indexes except where a V2 is indicated.

The V2 indication applies only to IDT for Illumina DNA/RNA and PCR UD Indexes. IDT for Illumina Nextera DNA UD Indexes do not include V2 indexes.

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0289V2  | GCTACTATCT          | AGATAGTAGC                | GGCACGCCAT          | GGCACGCCAT                                       | ATGGCGTGCC  |
| UDP0289    | GGAATTGTTTC         | GAACAATTCC                | TAGAGTTGGA          | TAGAGTTGGA                                       | TCCAACCTCA  |
| UDP0290V2  | GTCTTCTAAT          | ATTAGAAGAC                | GCAGGCTGGA          | GCAGGCTGGA                                       | TCCAGCCTGC  |
| UDP0290    | CCGGACCACAA         | TGTGGTCCGG                | AGAGCACTAG          | AGAGCACTAG                                       | CTAGTGCTCT  |
| UDP0291V2  | ATGTGCGAGC          | GCTCGCACAT                | ATGGCTTAAT          | ATGGCTTAAT                                       | ATTAAGCCAT  |
| UDP0291    | GACTTAGAAG          | CTTCTAACAGTC              | ACTCTACAGG          | ACTCTACAGG                                       | CCTGTAGAGT  |
| UDP0292    | TGGCAATATT          | AATATTGCCA                | CGGTGACACC          | CGGTGACACC                                       | GGTGTACCCG  |
| UDP0293    | GAATGCACGA          | TCGTGCATTTC               | CGC TTGGTAT         | CGC TTGGTAT                                      | ATACCAACGC  |
| UDP0294    | CGTGTATCTT          | AAGATAACACG               | TGTGCTAACAA         | TGTGCTAACAA                                      | TGTTAGCACA  |
| UDP0295    | ATTCATTGCA          | TGCAATGAAT                | CCAGAAGTAA          | CCAGAAGTAA                                       | TTACTTCTGG  |
| UDP0296    | TCCTTCATAG          | CTATGAAGGA                | CTTATACCTG          | CTTATACCTG                                       | CAGGTATAAG  |
| UDP0297    | TCTAGTCTTC          | GAAGACTAGA                | ACTAGAACTT          | ACTAGAACTT                                       | AAGTTCTAGT  |
| UDP0298    | CTCGACTCCT          | AGGAGTCGAG                | TTAGGCTTAC          | TTAGGCTTAC                                       | GTAAGCCTAA  |
| UDP0299    | AGTGAGTGAA          | TTCACTCACT                | TATCATGAGA          | TATCATGAGA                                       | TCTCATGATA  |
| UDP0300    | GAAGCGGACC          | GGTCCGCTTC                | CTCACACAAG          | CTCACACAAG                                       | CTTGTGTGAG  |
| UDP0301V2  | CAAGCCACTA          | TAGTGGTTG                 | AGTTACTTGG          | AGTTACTTGG                                       | CCAAGTAAC   |
| UDP0301    | GCTCTCGTTG          | CAACGAGAGC                | GAATTGAGTG          | GAATTGAGTG                                       | CACTCAATT   |
| UDP0302    | GGACCTCAAT          | ATTGAGGTCC                | CGGATTATAT          | CGGATTATAT                                       | ATATAATCCG  |
| UDP0303    | GAGTCTCTCC          | GGAGAGACTC                | TTGAAGCAGA          | TTGAAGCAGA                                       | TCTGCTCAA   |
| UDP0304    | AACGGAGCGG          | CCGCTCCGTT                | TACGGCGAAG          | TACGGCGAAG                                       | CTTCGCCGTA  |
| UDP0305    | TGTGATGTAT          | ATACATCACA                | TCTCCATTGA          | TCTCCATTGA                                       | TCAATGGAGA  |
| UDP0306    | AACATACCTA          | TAGGTATGTT                | CGAGACCAAG          | CGAGACCAAG                                       | CTTGGTCTCG  |
| UDP0307    | GTGCTAGGTG          | CACCTAGCAC                | TGCTGGACAT          | TGCTGGACAT                                       | ATGTCCAGCA  |
| UDP0308    | CATACTTGAA          | TTCAAGTATG                | GATGGTATCG          | GATGGTATCG                                       | CGATACCATC  |
| UDP0309    | CTTGTCTTAA          | TTAAGACAAG                | GGCTTAATTG          | GGCTTAATTG                                       | CAATTAAGCC  |
| UDP0310    | AAGAGAGGTG          | CACCTCTCTT                | CTCGACTCCT          | CTCGACTCCT                                       | AGGAGTCGAG  |
| UDP0311    | TGCACCGAGAA         | TTCTCGTGCA                | ATACACAGAG          | ATACACAGAG                                       | CTCTGTGTAT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0312    | ACTTCCTAGC          | GCTAGGAAGT                | TCTCGGACGA          | TCTCGGACGA                                       | TCGTCCGAGA  |
| UDP0313    | GTGCTATTAA          | TTAATAGCAC                | ACCACGTCTG          | ACCACGTCTG                                       | CAGACGTGGT  |
| UDP0314    | AGCGTGAATG          | CATTCACGCT                | GTTGTACTCA          | GTTGTACTCA                                       | TGAGTACAAC  |
| UDP0315    | CCTTAGTGCC          | GGCACTAAGG                | TCAGGTCAAC          | TCAGGTCAAC                                       | GTTGACCTGA  |
| UDP0316    | TGTACCGAAT          | ATTCCGGTACA               | AGTCCGAGGA          | AGTCCGAGGA                                       | TCCTCGGACT  |
| UDP0317    | GGAGATTAGT          | ACTAACCTCC                | CACTTAATCT          | CACTTAATCT                                       | AGATTAAGTG  |
| UDP0318    | TACTAACACA          | TGTGTTAGTA                | TACTCTGTTA          | TACTCTGTTA                                       | TAACAGAGTA  |
| UDP0319    | TAGGTCGTTG          | CAACGACCTA                | GCGACTCGAT          | GCGACTCGAT                                       | ATCGAGTCGC  |
| UDP0320    | ATGCCGACCG          | CGGTCGGCAT                | CTAGGCAAGG          | CTAGGCAAGG                                       | CCTGCCTAG   |
| UDP0321    | CTAGCGTCGA          | TCGACGCTAG                | CCTCTTCGAA          | CCTCTTCGAA                                       | TTCGAAGAGG  |
| UDP0322    | TGCCTACGAG          | CTCGTAGGCA                | TCATCCTCTT          | TCATCCTCTT                                       | AAGAGGATGA  |
| UDP0323    | ACTAGAACCT          | AAGTTCTAGT                | GGTAAGATAA          | GGTAAGATAA                                       | TTATCTTACC  |
| UDP0324    | CACCTCTTGG          | CCAAGAGGTG                | AACGAGCCAG          | AACGAGCCAG                                       | CTGGCTCGTT  |
| UDP0325    | AAGCAGATAT          | ATATCTGCTT                | TAGACAATCT          | TAGACAATCT                                       | AGATTGTCTA  |
| UDP0326    | GCCAGATCCA          | TGGATCTGGC                | CAATGCTGAA          | CAATGCTGAA                                       | TTCAGCATTG  |
| UDP0327    | TTGGATTCAA          | TTGAATCCAA                | GTCACGGTGT          | GTCACGGTGT                                       | ACACCGTGAC  |
| UDP0328    | ACTAGCCGTG          | CACGGCTAGT                | GGTGTACAAG          | GGTGTACAAG                                       | CTTGTACACC  |
| UDP0329    | CGGCAAGCTC          | GAGCTTGCCG                | AGGTTGCAGG          | AGGTTGCAGG                                       | CCTGAAACCT  |
| UDP0330    | GAAGCTAGCT          | AGCTAGCTTC                | TAATACGGAG          | TAATACGGAG                                       | CTCCGTATTA  |
| UDP0331    | ACAAGGATTG          | CAATCCTTGT                | CGAAGACGCA          | CGAAGACGCA                                       | TGCGTCTTCG  |
| UDP0332    | GCAACAGGTG          | CACCTGTTGC                | ATTGACACAT          | ATTGACACAT                                       | ATGTGTCAAT  |
| UDP0333    | CAAGGTGACG          | CGTCACCTTG                | CAGCCGATTG          | CAGCCGATTG                                       | CAATCGGCTG  |
| UDP0334    | ACCAGTCATT          | AATGACTGGT                | TCTCACCGT           | TCTCACCGT  | ACCGGTGAGA  |
| UDP0335    | CCGGAATCAT          | ATGATTCCGG                | CTCTGACGTG          | CTCTGACGTG                                       | CACGTCAGAG  |
| UDP0336    | TTGAGCCTAA          | TTAGGCTCAA                | TCGAATGGAA          | TCGAATGGAA                                       | TTCCATTGCA  |
| UDP0337    | CCACCTTACA          | TGTAAGGTGG                | AAGGCCTTGG          | AAGGCCTTGG                                       | CCAAGGCCTT  |
| UDP0338    | GTTGCAGTTG          | CAACTGCAAC                | TGAACGCAAC          | TGAACGCAAC                                       | GTTGCGTTCA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0339    | TCACTCATGT          | ACATGAGTGA                | CCGCTTAGCT          | CCGCTTAGCT                                       | AGCTAAGCGG  |
| UDP0340    | GACTGGTTGC          | GCAACCAGTC                | CACCGAGGAA          | CACCGAGGAA                                       | TTCCTCGGTG  |
| UDP0341    | ATCGTCGCTC          | GAGCGACGAT                | CGTATAATCA          | CGTATAATCA                                       | TGATTATACG  |
| UDP0342    | GGTGCGTTCG          | CGAACGCACC                | ATGACAGAAC          | ATGACAGAAC                                       | GTTCTGTCAT  |
| UDP0343    | CGGCGTAAGA          | TCTTACGCCG                | ATTCAATTGCA         | ATTCAATTGCA                                      | TGCAATGAAT  |
| UDP0344    | GACATCAGCT          | AGCTGATGTC                | TCATGTCTG           | TCATGTCTG  | CAGGACATGA  |
| UDP0345    | ACTAATTTCAG         | CTGAATTAGT                | AATTGATCG           | AATTGATCG  | CGATCGAATT  |
| UDP0346    | TTCCTCCTTA          | TAAGGAGGAA                | TTCCGACATT          | TTCCGACATT                                       | AATGTCGGAA  |
| UDP0347    | TGTGTAAAGCT         | AGCTTACACA                | TGGCACGACC          | TGGCACGACC                                       | GGTCGTGCCA  |
| UDP0348    | GTGGCTGGTT          | AACCAGCCAC                | GCCACAGCAC          | GCCACAGCAC                                       | GTGCTGTGGC  |
| UDP0349    | TCGACTTAAG          | CTTAAGTCGA                | CAGTAGTTGT          | CAGTAGTTGT                                       | ACAACACTTG  |
| UDP0350    | CACGTTAGGC          | GCCTAACGTG                | AGCTCTCAAG          | AGCTCTCAAG                                       | CTTGAGAGCT  |
| UDP0351    | TGAAGTAAGT          | ACTTACTTCA                | TCTGGAATTA          | TCTGGAATTA                                       | TAATTCCAGA  |
| UDP0352    | ACGGAATGCG          | CGCATTCCGT                | ATTAGTGGAG          | ATTAGTGGAG                                       | CTCCACTAAT  |
| UDP0353    | GTGTGATATC          | GATATCACAC                | GAATATATGT          | GAATATATGT                                       | ACATATAGTC  |
| UDP0354    | ACACAGCGCT          | AGCGCTGTGT                | CGTTCGGAAC          | CGTTCGGAAC                                       | GTTCCGAACG  |
| UDP0355    | AGCGCGGTGA          | TCACCGCGCT                | TCGATACTAG          | TCGATACTAG                                       | CTAGTATCGA  |
| UDP0356    | CAAGGCTATC          | GATAGCCTTG                | TACCACAATG          | TACCACAATG                                       | CATTGTGGTA  |
| UDP0357    | TGCGTCCAGG          | CCTGGACGCA                | TGGTATAACCA         | TGGTATAACCA                                      | TGGTATAACCA   |
| UDP0358    | AGGTGCGTAA          | TTACGCACCT                | GCTCTCGTTG          | GCTCTCGTTG                                       | CAACGAGAGC  |
| UDP0359    | GCAGCAACGA          | TCGTTGCTGC                | GTCTCGTCAA          | GTCTCGTCAA                                       | TTCACGAGAC  |
| UDP0360    | ATCCTTGTG           | CGACAAGGAT                | AAGGCCACCT          | AAGGCCACCT                                       | AGGTGGCCTT  |
| UDP0361    | GAAGGTACAC          | GTGTACCTTC                | CTGTGAGCTA          | CTGTGAGCTA                                       | TAGCTCACAG  |
| UDP0362    | TTGGCCAGGT          | ACCTGGCCAA                | TCACAGATCG          | TCACAGATCG                                       | CGATCTGTGA  |
| UDP0363    | AGGCCAGACA          | TGTCTGGCCT                | AGAAGCCAAT          | AGAAGCCAAT                                       | ATTGGCTTCT  |
| UDP0364    | AGCATTAACT          | AGTTAATGCT                | ACTGCAGCCG          | ACTGCAGCCG                                       | CGGCTGCAGT  |
| UDP0365    | ATTACTCACC          | GGTGAGTAAT                | AACATCTAGT          | AACATCTAGT                                       | ACTAGATGTT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDP0366    | GCGCAGAGTA          | TACTCTGCGC                | CCTTACTATG          | CCTTACTATG                                       | CATAGTAAGG  |
| UDP0367    | CGCCATACCT          | AGGTATGGCG                | GTGGCGAGAC          | GTGGCGAGAC                                       | GTCTGCCAC   |
| UDP0368    | GCAGGGCTGGA         | TCCAGCCTGC                | GCCAGATCCA          | GCCAGATCCA                                       | TGGATCTGGC  |
| UDP0369    | GTTATATGGC          | GCCATATAAC                | ACACAATATC          | ACACAATATC                                       | GATATTGTGT  |
| UDP0370    | CACTCGCACT          | AGTGCGAGTG                | TGGAGGTAAT          | TGGAGGTAAT                                       | ATTACCTCCA  |
| UDP0371    | ACCGGCTCAG          | CTGAGCCGGT                | CCTTCACGTA          | CCTTCACGTA                                       | TACGTGAAGG  |
| UDP0372    | ATAGACCGTT          | AACGGTCTAT                | CTATACGCGG          | CTATACGCGG                                       | CCCGGTATAG  |
| UDP0373    | TGAACGCAAC          | GTTGCAGTTCA               | GTTGCAGTTG          | GTTGCAGTTG                                       | CAACTGCAAC  |
| UDP0374    | GTGGTTGAAG          | CTTCAACCAC                | TTATGCGCCT          | TTATGCGCCT                                       | AGGCGCATAA  |
| UDP0375    | ACTGAATAGA          | TCTATTCACT                | TCTCAGTACA          | TCTCAGTACA                                       | TGTACTGAGA  |
| UDP0376    | GGACGTCTTG          | CAAGACGTCC                | AGTATACGGA          | AGTATACGGA                                       | TCCGTATACT  |
| UDP0377    | GTTGTACTCA          | TGAGTACAAC                | ACGCTTGGAC          | ACGCTTGGAC                                       | GTCCAAGCGT  |
| UDP0378    | AGAACCGCGG          | CCGCGGTTCT                | GGAGTAGATT          | GGAGTAGATT                                       | AATCTACTCC  |
| UDP0379    | CAGTATCAAT          | ATTGATACTG                | TACACGCTCC          | TACACGCTCC                                       | GGAGCGTGT   |
| UDP0380    | TCCATAATCC          | GGATTATGGA                | TCCGATAGAG          | TCCGATAGAG                                       | CTCTATCGGA  |
| UDP0381    | ATGAGAACCA          | TGGTTCTCAT                | CTCAAGGCCG          | CTCAAGGCCG                                       | CGGCCTTGAG  |
| UDP0382    | TCGTGGTTGA          | TCAACCACGA                | CAAGTTCATA          | CAAGTTCATA                                       | TATGAACCTG  |
| UDP0383    | CAAGTTCATA          | TATGAACCTG                | AATCCTTAGG          | AATCCTTAGG                                       | CCTAAGGATT  |
| UDP0384    | CTTAACCAC           | AGTGGTTAAG                | GGTGGAATAC          | GGTGGAATAC                                       | GTATTCCACC  |

## Nextera DNA Indexes

### Index 1 (i7) Adapters

The i7 index names vary by kit:

- H7xx—Nextera DNA CD Indexes (combinatorial dual)
- N7xx—Nextera XT Index Kit v2, Nextera Index Kit

| i7 Index Name | Bases in Adapter | i7 Bases for Sample Sheet |
|---------------|------------------|---------------------------|
| [H/N]701      | TCGCCTTA         | TAAGGCGA                  |
| [H/N]702      | CTAGTACG         | CGTACTAG                  |
| [H/N]703      | TTCTGCCT         | AGGCAGAA                  |
| [H/N]704      | GCTCAGGA         | TCCTGAGC                  |
| [H/N]705      | AGGAGTCC         | GGACTCCT                  |
| [H/N]706      | CATGCCATA        | TAGGCATG                  |
| [H/N]707      | GTAGAGAG         | CTCTCTAC                  |
| [H/N]708      | CCTCTCTG         | CAGAGAGG                  |
| [H/N]709      | AGCGTAGC         | GCTACGCT                  |
| [H/N]710      | CAGCCTCG         | CGAGGCTG                  |
| [H/N]711      | TGCCTCTT         | AAGAGGCA                  |
| [H/N]712      | TCCTCTAC         | GTAGAGGA                  |
| [H/N]714      | TCATGAGC         | GCTCATGA                  |
| [H/N]715      | CCTGAGAT         | ATCTCAGG                  |
| [H/N]716      | TAGCGAGT         | ACTCGCTA                  |
| [H/N]718      | GTAGCTCC         | GGAGCTAC                  |
| [H/N]719      | TACTACGC         | GCGTAGTA                  |
| [H/N]720      | AGGCTCCG         | CGGAGCCT                  |
| [H/N]721      | GCAGCGTA         | TACGCTGC                  |
| [H/N]722      | CTGCGCAT         | ATGCGCAG                  |
| [H/N]723      | GAGCGCTA         | TAGCGCTC                  |
| [H/N]724      | CGCTCAGT         | ACTGAGCG                  |
| [H/N]726      | GTCTTAGG         | CCTAAGAC                  |
| [H/N]727      | ACTGATCG         | CGATCAGT                  |
| [H/N]728      | TAGCTGCA         | TGCAGCTA                  |
| [H/N]729      | GACGTCGA         | TCGACGTC                  |

## Index 2 (i5) Adapters

The i5 index names vary by kit:

- E5xx—Nextera Rapid Capture Custom Enrichment Kit
- H5xx—Nextera DNA CD Indexes (combinatorial dual)

- N5xx—Nextera Index Kit
- S5xx—Nextera XT Index Kit v2

Refer to [Index 2 \(i5\) Orientation](#) on page 1 for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|------------------|--|---|
| [E/H/N/S]501  | TAGATCGC         | TAGATCGC   | GCGATCTA  |
| [E/H/N/S]502  | CTCTCTAT         | CTCTCTAT   | ATAGAGAG  |
| [E/H/N/S]503  | TATCCTCT         | TATCCTCT   | AGAGGATA  |
| [E/H/N/S]504  | AGAGTAGA         | AGAGTAGA   | TCTACTCT  |
| [E/H/N/S]505  | GTAAGGAG         | GTAAGGAG   | CTCCTTAC  |
| [E/H/N/S]506  | ACTGCATA         | ACTGCATA   | TATGCAGT  |
| [E/H/N/S]507  | AAGGAGTA         | AAGGAGTA   | TACTCCTT  |
| [E/H/N/S]508  | CTAACGCCT        | CTAACGCCT  | AGGCTTAG  |
| [E/H/N/S]510  | CGTCTAAT         | CGTCTAAT   | ATTAGACG  |
| [E/H/N/S]511  | TCTCTCCG         | TCTCTCCG   | CGGAGAGA  |
| [E/H/N/S]513  | TCGACTAG         | TCGACTAG   | CTAGTCGA  |
| [E/H/N/S]515  | TTCTAGCT         | TTCTAGCT   | AGCTAGAA  |
| [E/H/N/S]516  | CCTAGAGT         | CCTAGAGT   | ACTCTAGG  |
| [E/H/N/S]517  | GCGTAAGA         | GCGTAAGA   | TCTTACGC  |
| [E/H/N/S]518  | CTATTAAG         | CTATTAAG   | CTTAATAG  |
| [E/H/N/S]520  | AAGGCTAT         | AAGGCTAT   | ATAGCCTT  |
| [E/H/N/S]521  | GAGCCTTA         | GAGCCTTA   | TAAGGCTC  |
| [E/H/N/S]522  | TTATGCGA         | TTATGCGA   | TCGCATAA  |

# Sequences for AmpliSeq for Illumina Panels

The AmpliSeq for Illumina CD and UD index adapters are arranged in the plate to enforce the recommended pairing strategy.

## Adapter Trimming

The following sequence is used for Read 1 and Read 2 adapter trimming.

CTGTCTTATACACATCT

## Index 1 (i7) Adapters

CAAGCAGAAGACGGCATACGAGAT [i7] GTCTCGTGGCTCGGAGATGTGTATAAGAGACAG

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| Q7005         | GTGAATAT                  |
| Q7006         | ACAGGCAG                  |
| Q7007         | CATAGAGT                  |
| Q7008         | TGCGAGAC                  |
| Q7015         | TCTCTACT                  |
| Q7016         | CTCTCGTC                  |
| Q7017         | CCAAGTCT                  |
| Q7018         | TTGGACTC                  |
| Q7023         | GCAGAATT                  |
| Q7024         | ATGAGGCC                  |
| Q7025         | ACTAAGAT                  |
| Q7026         | GTCGGAGC                  |
| Q7027         | AGCCTCAT                  |
| Q7028         | GATTCTGC                  |
| Q7029         | TCGTAGTG                  |
| Q7030         | CTACGACA                  |
| Q7035         | ATGGCATG                  |
| Q7036         | GCAATGCA                  |
| Q7039         | CTTATCGG                  |

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| Q7040         | TCCGCTAA                  |
| Q7041         | GATCTATC                  |
| Q7042         | AGCTCGCT                  |
| Q7047         | ACACTAAG                  |
| Q7048         | GTGTCGGA                  |

## Index 2 (i5) Adapters

AATGATAACGGCGACCACCGAGATCTACAC [i5] TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| Q5001         | AGCGCTAG   | CTAGCGCT  |
| Q5002         | GATATCGA   | TCGATATC  |
| Q5003         | CGCAGACG   | CGTCTGCG  |
| Q5004         | TATGAGTA   | TACTCATA  |
| Q5007         | ACATAGCG   | CGCTATGT  |
| Q5008         | GTGCGATA   | TATCGCAC  |
| Q5009         | CCAACAGA   | TCTGTTGG  |
| Q5010         | TTGGTGAG   | CTCACCAA  |
| Q5013         | AACCGCGG   | CCGCGGTT  |
| Q5014         | GGTTATAA   | TTATAACC  |
| Q5017         | CTAGCTTG   | CAAGCTAG  |
| Q5018         | TCGATCCA   | TGGATCGA  |
| Q5025         | ATACCAAG   | CTTGGTAT  |
| Q5026         | GCGTTGGA   | TCCAACGC  |
| Q5027         | CTTCACGG   | CCGTGAAG  |
| Q5028         | TCCTGTAA   | TTACAGGA  |
| Q5029         | CCTCGGTA   | TACCGAGG  |
| Q5030         | TTCTAACG   | CGTTAGAA  |

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| Q5031         | CGCTCGTG   | CACGAGCG  |
| Q5032         | TATCTACA   | TGTAGATA  |
| Q5035         | CATTGTTG   | CAACAATG  |
| Q5036         | TGCCACCA   | TGGTGGCA  |
| Q5039         | ACGCCGCA   | TGCGGCGT  |
| Q5040         | GTATTATG   | CATAATAC  |

# Sequences for TruSight Kits

This section lists the adapter sequences for Illumina TruSight library prep kits.

Refer to [IDT for Illumina UD Indexes on page 22](#) for the following kits:

- TruSight Oncology 500 ctDNA v2
- TruSight Oncology 500 HT

## TruSight Amplicon Panels

TruSight amplicon panels include the TruSight Myeloid Sequencing Panel and TruSight Tumor 26.

### Index 1 (i7) Adapters

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| A701          | ATCACGAC                  |
| A702          | ACAGTGGT                  |
| A703          | CAGATCCA                  |
| A704          | ACAAACGG                  |
| A705          | ACCCAGCA                  |
| A706          | AACCCCTC                  |
| A707          | CCCCAACCT                 |
| A708          | CACCACAC                  |
| A709          | GAAACCCA                  |
| A710          | TGTGACCA                  |
| A711          | AGGGTCAA                  |
| A712          | AGGAGTGG                  |

### Index 2 (i5) Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| A501          | TGAACCTT   | AAGGTTCA  |
| A502          | TGCTAAGT   | ACTTAGCA  |
| A503          | TGTTCTCT   | AGAGAACAA   |
| A504          | TAAGACAC   | GTTGCTTA  |
| A505          | CTAATCGA   | TCGATTAG  |
| A506          | CTAGAACAA  | TGTTCTAG  |
| A507          | TAAGTTCC   | GGAACCTTA   |
| A508          | TAGACCTA   | TAGGTCTA  |

## TruSight DNA Enrichment Kits

TruSight DNA enrichment kits include TruSeq Neurodegeneration, TruSight Cancer, TruSight Cardio, TruSight One, TruSight Inherited Disease, and TruSight Rapid Capture.

### Adapter Trimming

The following sequence is used for Read 1 and Read 2 adapter trimming.

CTGTCTCTTATACACATCT

### Index 1 (i7) Adapters

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| N701          | TAAGGCAGA                 |
| N702          | CGTACTAG                  |
| N703          | AGGCAGAA                  |
| N704          | TCCTGAGC                  |
| N705          | GGACTCCT                  |
| N706          | TAGGCATG                  |
| N707          | CTCTCTAC                  |
| N708          | CAGAGAGG                  |
| N709          | GCTACGCT                  |
| N710          | CGAGGGCTG                 |
| N711          | AAGAGGCA                  |

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| N712          | GTAGAGGA                  |

## Index 2 (i5) Adapter

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| E501          | TAGATCGC   | GCGATCTA  |
| E502          | CTCTCTAT   | ATAGAGAG  |
| E503          | TATCCTCT   | AGAGGATA  |
| E504          | AGAGTAGA   | TCTACTCT  |
| E505          | GTAAGGAG   | CTCCTTAC  |
| E506          | ACTGCATA   | TATGCAGT  |
| E507          | AAGGAGTA   | TACTCCTT  |
| E508          | CTAACGCCT  | AGGCTTAG  |
| E517          | GCGTAAGA   | TCTTACGC  |

## TruSight Tumor 170 and TruSight Oncology 500

### Adapter Trimming

The following sequences are used for adapter trimming.

#### Read 1

AGATCGGAAGAGCACACGTCTGAACCTCCAGTCA

#### Read 2

AGATCGGAAGAGCGTCGTAGGGAAAGAGTGTT

### RNA Index 1 (i7) Adapters

| i7 Index Name | Index Primer | i7 Bases for Sample Sheet |
|---------------|--------------|---------------------------|
| D702          | UP01         | TCCGGAGA                  |
| D707          | UP02         | CTGAAGCT                  |
| D717          | UP03         | CGTAGCTC                  |

| i7 Index Name | Index Primer | i7 Bases for Sample Sheet |
|---------------|--------------|---------------------------|
| D706          | UP04         | GAATTCGT                  |
| D712          | UP05         | AGCGATAG                  |
| D724          | UP06         | GCGATTAA                  |
| D705          | UP07         | ATTCAGAA                  |
| D713          | UP08         | GAATAATC                  |
| D715          | UP09         | TTAACAG                   |
| D703          | UP10         | CGCTCAT                   |
| D710          | UP11         | TCCGCGAA                  |
| D701          | UP12         | ATTACTCG                  |
| D716          | UP13         | ACTGCTTA                  |
| D714          | UP14         | ATGCGGCT                  |
| D718          | UP15         | GCCTCTCT                  |
| D719          | UP16         | GCCGTAGG                  |

## RNA Index 2 (i5) Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | Index Primer | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--------------|--|---|
| D503          | UP01         | CCTATCCT   | AGGATAGG  |
| D504          | UP02         | GGCTCTGA   | TCAGAGCC  |
| D509          | UP03         | TTCGGATG   | CATCCGAA  |
| D510          | UP04         | ACTCATAA   | TTATGAGT  |
| D513          | UP05         | TTATTCGT   | ACGAATAA  |
| D515          | UP06         | AGCAGATC   | GATCTGCT  |
| D501          | UP07         | TATAGCCT   | AGGCTATA  |
| D502          | UP08         | ATAGAGGC   | GCCTCTAT  |
| D505          | UP09         | AGGCCAAG   | CTTCGCCT  |
| D506          | UP10         | TAATCTTA   | TAAGATTA  |

| i5 Index Name | Index Primer | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--------------|--|---|
| D517          | UP11         | TACTTACT   | AGTAAGTA  |
| D518          | UP12         | AGGAAGTC   | GACTTCCT  |
| D511          | UP13         | GCGCCTCT   | AGAGGGCGC   |
| D512          | UP14         | CGCGGCTA   | TAGCCGCG  |
| D514          | UP15         | CCTACGAA   | TTCGTAGG  |
| D516          | UP16         | GC GGAGCG  | CGCTCCGC  |

### DNA Index 1 (i7) Adapters

| i7 Index Name | Index Primer | i7 Bases for Sample Sheet |
|---------------|--------------|---------------------------|
| D721          | CP01         | CATCGAGG                  |
| D723          | CP02         | CTCGACTG                  |
| D709          | CP03         | CGGCTATG                  |
| D711          | CP04         | TCTCGCGC                  |
| D723          | CP05         | CTCGACTG                  |
| D709          | CP06         | CGGCTATG                  |
| D711          | CP07         | TCTCGCGC                  |
| D721          | CP08         | CATCGAGG                  |
| D709          | CP09         | CGGCTATG                  |
| D711          | CP10         | TCTCGCGC                  |
| D721          | CP11         | CATCGAGG                  |
| D723          | CP12         | CTCGACTG                  |
| D711          | CP13         | TCTCGCGC                  |
| D721          | CP14         | CATCGAGG                  |
| D723          | CP15         | CTCGACTG                  |
| D709          | CP16         | CGGCTATG                  |

### DNA Index 2 (i5) Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | Index Primer | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--------------|--|---|
| D507          | CP01         | CAGGACGT   | ACGTCCCTG   |
| D508          | CP02         | GTACTGAC   | GTCAGTAC  |
| D519          | CP03         | GGCGACGG   | CCGTCGCC  |
| D520          | CP04         | CCTCGGAC   | GTCCGAGG  |
| D507          | CP05         | CAGGACGT   | ACGTCCCTG   |
| D507          | CP06         | CAGGACGT   | ACGTCCCTG   |
| D507          | CP07         | CAGGACGT   | ACGTCCCTG   |
| D508          | CP08         | GTACTGAC   | GTCAGTAC  |
| D508          | CP09         | GTACTGAC   | GTCAGTAC  |
| D508          | CP10         | GTACTGAC   | GTCAGTAC  |
| D519          | CP11         | GGCGACGG   | CCGTCGCC  |
| D519          | CP12         | GGCGACGG   | CCGTCGCC  |
| D519          | CP13         | GGCGACGG   | CCGTCGCC  |
| D520          | CP14         | CCTCGGAC   | GTCCGAGG  |
| D520          | CP15         | CCTCGGAC   | GTCCGAGG  |
| D520          | CP16         | CCTCGGAC   | GTCCGAGG  |

## TruSight Oncology ctDNA

Refer to [IDT for Illumina UD Indexes on page 22](#) for TruSight Oncology 500 ctDNA v2 kits.

### Adapter Trimming

The following sequences are used for adapter trimming.

#### Read 1

AGATCGGAAGAGCACACGTCTGAACCTCCAGTCA

#### Read 2

AGATCGGAAGAGCGTCGTAGGGAAAGAGTGT

## DNA Index 1 (i7) Adapters

| i7 Index Name | Index Primer | i7 Bases for Sample Sheet |
|---------------|--------------|---------------------------|
| D702          | UP01         | TCCGGAGA                  |
| D707          | UP02         | CTGAAGCT                  |
| D717          | UP03         | CGTAGCTC                  |
| D706          | UP04         | GAATTCGT                  |
| D712          | UP05         | AGCGATAG                  |
| D724          | UP06         | GCGATTAA                  |
| D705          | UP07         | ATTCAGAA                  |
| D713          | UP08         | GAATAATC                  |
| D715          | UP09         | TTAACATCG                 |
| D703          | UP10         | CGCTCATTA                 |
| D710          | UP11         | TCCGCGAA                  |
| D701          | UP12         | ATTACTCG                  |
| D716          | UP13         | ACTGCTTA                  |
| D714          | UP14         | ATGCAGCT                  |
| D718          | UP15         | GCCTCTCT                  |
| D719          | UP16         | GCCGTAGG                  |

## DNA Index 2 (i5) Adapters

| i5 Index Name | Index Primer | i5 Bases for Sample Sheet |
|---------------|--------------|---------------------------|
| D503          | UP01         | CCTATCCT                  |
| D504          | UP02         | GGCTCTGA                  |
| D509          | UP03         | TTCGGATG                  |
| D510          | UP04         | ACTCATAA                  |
| D513          | UP05         | TTATTCGT                  |
| D515          | UP06         | AGCAGATC                  |
| D501          | UP07         | TATAGCCT                  |
| D502          | UP08         | ATAGAGGC                  |
| D505          | UP09         | AGGCGAAG                  |

| i5 Index Name | Index Primer | i5 Bases for Sample Sheet |
|---------------|--------------|---------------------------|
| D506          | UP10         | TAATCTTA                  |
| D517          | UP11         | TACTTACT                  |
| D518          | UP12         | AGGAAGTC                  |
| D511          | UP13         | GCGCCTCT                  |
| D512          | UP14         | CGCGGCTA                  |
| D514          | UP15         | CCTACGAA                  |
| D516          | UP16         | GC GGAGCG                 |

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### Index 1 (i7) Adapters

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| R701          | ATCACG                    |
| R702          | CGATGT                    |
| R703          | TTAGGC                    |
| R704          | TGACCA                    |
| R705          | ACAGTG                    |
| R706          | GCCAAT                    |
| R707          | CAGATC                    |
| R708          | ACTTGA                    |
| R709          | GATCAG                    |
| R749          | GATGCT                    |
| R711          | GGCTAC                    |
| R712          | CTTGTA                    |
| R725          | ACTGAT                    |
| R726          | ATGAGC                    |
| R727          | ATTCCCT                   |
| R728          | CAAAAG                    |
| R729          | CAACTA                    |
| R730          | CACCGG                    |

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| R731          | CACGAT                    |
| R732          | CACTCA                    |
| R733          | CAGGCG                    |
| R734          | CATGGC                    |
| R735          | CATTTT                    |
| R736          | CCAACA                    |

## Index 2 (i5) Adapter

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| A501          | TGAACCTT   | AAGGTTCA  |
| A502          | TGCTAAGT   | ACTTAGCA  |

## TruSight RNA Pan-Cancer Panel

### Adapter Trimming

The following sequences are used for adapter trimming.

#### Read 1

AGATCGGAAGAGCACACGTCTGAACCTCCAGTC

#### Read 2

AGATCGGAAGAGCGTCGTAGGGAAAGAGTGT

### Universal Adapter

5' AATGATAACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTTCCGATCT

### Index Adapters

Index adapter sequences are six bases as underlined. Enter the six underlined bases in the sample sheet.

The index numbering is not sequential, so indexes 17, 24, and 26 are skipped. Additionally, the bases preceding each index adapter sequence are the same, but the two bases following the index adapter sequence can vary.

**Index Adapter 1**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACATCAC~~GATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 2**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACCGATGT~~TATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 3**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACCTAGGCAT~~TCGTATGCCGTCTCTGCTTG

**Index Adapter 4**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACTGACCA~~ATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 5**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACACAGT~~GATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 6**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACGCCA~~ATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 7**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACCAGA~~TCTCGTATGCCGTCTCTGCTTG

**Index Adapter 8**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACACTGAA~~TCTCGTATGCCGTCTCTGCTTG

**Index Adapter 9**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACGATCAG~~ATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 10**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACTAGCTT~~ATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 11**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACGGCTAC~~ATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 12**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACCTTGAA~~TCTCGTATGCCGTCTCTGCTTG

**Index Adapter 13**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACAGTCAAC~~AATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 14**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACAGTCCGT~~TATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 15**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACATGTCAGA~~ATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 16**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCACCCGTC~~CGATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 18**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGTCCGCACATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 19**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGTGAAACGATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 20**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGTGGCCTTATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 21**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGTTCGGAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 22**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACCGTACGTAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 23**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGAGTGGATATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 25**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACACTGATAATATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 27**

5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACATTCCATTATCTCGTATGCCGTCTCTGCTTG

# Sequences for TruSeq Kits

This section lists the adapter sequences for Illumina TruSeq library prep kits.

## IDT for Illumina–TruSeq DNA and RNA UD Indexes

The IDT for Illumina TruSeq unique dual (UD) index adapters are arranged in the plate to enforce the recommended pairing strategy.

A-tailing is performed before adapter ligation. For example, the additional A base is in parentheses in the i7 adapter, as follows.

### Index 1 (i7) Adapters

(A)GATCGGAAGAGCACACGTCTGAACCTCCAGTCAC[i7]ATCTCGTATGCCGTCTCTGCTTG

### Adapter Trimming

The following sequences are used for adapter trimming.

#### Read 1

AGATCGGAAGAGCACACGTCTGAACCTCCAGTCAGTCA

#### Read 2

AGATCGGAAGAGCGTCGTAGGGAAAGAGTGT

### Index Adapters

#### Index 1 (i7) Adapters

GATCGGAAGAGCACACGTCTGAACCTCCAGTCAC [i7]ATCTCGTATGCCGTCTCTGCTTG

#### Index 2 (i5) Adapters

AATGATA CGGCACCACCGAGATCTACAC [i5]ACACTTTCCCTACACGACGCTCTCCGATCT

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDI0001    | CCGCGGTT            | CCGCGGTT                  | AGCGCTAG            | AGCGCTAG   | CTAGCGCT  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDI0002    | TTATAACC            | TTATAACC                  | GATATCGA            | GATATCGA   | TCGATATC  |
| UDI0003    | GGACTTGG            | GGACTTGG                  | CGCAGACG            | CGCAGACG   | CGTCTGCG  |
| UDI0004    | AAGTCCAA            | AAGTCCAA                  | TATGAGTA            | TATGAGTA   | TACTCATA  |
| UDI0005    | ATCCACTG            | ATCCACTG                  | AGGTGCGT            | AGGTGCGT   | ACGCACCT  |
| UDI0006    | GCTTGTCA            | GCTTGTCA                  | GAACATAC            | GAACATAC   | GTATGTTC  |
| UDI0007    | CAAGCTAG            | CAAGCTAG                  | ACATAGCG            | ACATAGCG   | CGCTATGT  |
| UDI0008    | TGGATCGA            | TGGATCGA                  | GTGCGATA            | GTGCGATA   | TATCGCAC  |
| UDI0009    | AGTTCAGG            | AGTTCAGG                  | CCAACAGA            | CCAACAGA   | TCTGTTGG  |
| UDI0010    | GACCTGAA            | GACCTGAA                  | TTGGTGAG            | TTGGTGAG   | CTCACCAA  |
| UDI0011    | TCTCTACT            | TCTCTACT                  | CGCGGTTC            | CGCGGTTC   | GAACCGCG  |
| UDI0012    | CTCTCGTC            | CTCTCGTC                  | TATAACCT            | TATAACCT   | AGGTTATA  |
| UDI0013    | CCAAGTCT            | CCAAGTCT                  | AAGGATGA            | AAGGATGA   | TCATCCTT  |
| UDI0014    | TTGGACTC            | TTGGACTC                  | GGAAGCAG            | GGAAGCAG   | CTGCTTCC  |
| UDI0015V2  | CAGTAGGC            | CAGTAGGC                  | TGACGAAT            | TGACGAAT   | ATTCGTCA  |
| UDI0015    | GGCTTAAG            | GGCTTAAG                  | TCGTGACC            | TCGTGACC   | GGTCACGA  |
| UDI0016V2  | TGACGAAT            | TGACGAAT                  | CAGTAGGC            | CAGTAGGC   | GCCTACTG  |
| UDI0016    | AATCCGGA            | AATCCGGA                  | CTACAGTT            | CTACAGTT   | AACTGTAG  |
| UDI0017    | TAATACAG            | TAATACAG                  | ATATTCAC            | ATATTCAC   | GTGAATAT  |
| UDI0018    | CGGCGTGA            | CGGCGTGA                  | GCGCCTGT            | GCGCCTGT   | ACAGGCGC  |
| UDI0019    | ATGTAAGT            | ATGTAAGT                  | ACTCTATG            | ACTCTATG   | CATAGAGT  |
| UDI0020    | GCACGGAC            | GCACGGAC                  | GTCTCGCA            | GTCTCGCA   | TGCGAGAC  |
| UDI0021    | GGTACCTT            | GGTACCTT                  | AAGACGTC            | AAGACGTC   | GACGTCTT  |
| UDI0022    | AACGTTCC            | AACGTTCC                  | GGAGTACT            | GGAGTACT   | AGTACTCC  |
| UDI0023    | GCAGAATT            | GCAGAATT                  | ACCGGCCA            | ACCGGCCA   | TGGCCGGT  |
| UDI0024    | ATGAGGCC            | ATGAGGCC                  | GTAAATTG            | GTAAATTG   | CAATTAAC  |
| UDI0025    | ACTAAGAT            | ACTAAGAT                  | AACCGCGG            | AACCGCGG   | CCGCGGTT  |
| UDI0026    | GTCGGAGC            | GTCGGAGC                  | GGTTATAA            | GGTTATAA   | TTATAACC  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDI0027    | CTTGGTAT            | CTTGGTAT                  | CCAAGTCC            | CCAAGTCC   | GGACTTGG  |
| UDI0028    | TCCAACGC            | TCCAACGC                  | TTGGACTT            | TTGGACTT   | AAGTCCAA  |
| UDI0029    | CCGTGAAG            | CCGTGAAG                  | CAGTGGAT            | CAGTGGAT   | ATCCACTG  |
| UDI0030    | TTACAGGA            | TTACAGGA                  | TGACAAGC            | TGACAAGC   | GCTTGTCA  |
| UDI0031    | GGCATTCT            | GGCATTCT                  | CTAGCTTG            | CTAGCTTG   | CAAGCTAG  |
| UDI0032    | AATGCCTC            | AATGCCTC                  | TCGATCCA            | TCGATCCA   | TGGATCGA  |
| UDI0033    | TACCGAGG            | TACCGAGG                  | CCTGAACT            | CCTGAACT   | AGTTTCAGG   |
| UDI0034    | CGTTAGAA            | CGTTAGAA                  | TTCAGGTC            | TTCAGGTC   | GACCTGAA  |
| UDI0035    | AGCCTCAT            | AGCCTCAT                  | AGTAGAGA            | AGTAGAGA   | TCTCTACT  |
| UDI0036    | GATTCTGC            | GATTCTGC                  | GACGAGAG            | GACGAGAG   | CTCTCGTC  |
| UDI0037    | TCGTAGTG            | TCGTAGTG                  | AGACTTGG            | AGACTTGG   | CCAAGTCT  |
| UDI0038    | CTACGACA            | CTACGACA                  | GAGTCCAA            | GAGTCCAA   | TTGGACTC  |
| UDI0039    | TAAGTGGT            | TAAGTGGT                  | CTTAAGCC            | CTTAAGCC   | GGCTTAAG  |
| UDI0040    | CGGACAAC            | CGGACAAC                  | TCCGGATT            | TCCGGATT   | AATCCGGA  |
| UDI0041    | ATATGGAT            | ATATGGAT                  | CTGTATTA            | CTGTATTA   | TAATACAG  |
| UDI0042    | GCGCAAGC            | GCGCAAGC                  | TCACGCCG            | TCACGCCG   | CGGCGTGA  |
| UDI0043    | AAGATACT            | AAGATACT                  | ACTTACAT            | ACTTACAT   | ATGTAAGT  |
| UDI0044    | GGAGCGTC            | GGAGCGTC                  | GTCCGTGC            | GTCCGTGC   | GCACGGAC  |
| UDI0045    | ATGGCATG            | ATGGCATG                  | AAGGTACC            | AAGGTACC   | GGTACCTT  |
| UDI0046    | GCAATGCA            | GCAATGCA                  | GGAACGTT            | GGAACGTT   | AACGTTCC  |
| UDI0047    | GTTCCAAT            | GTTCCAAT                  | AATTCTGC            | AATTCTGC   | GCAGAAATT   |
| UDI0048    | ACCTTGGC            | ACCTTGGC                  | GGCCTCAT            | GGCCTCAT   | ATGAGGCC  |
| UDI0049    | ATATCTCG            | ATATCTCG                  | ATCTTAGT            | ATCTTAGT   | ACTAAGAT  |
| UDI0050    | GCGCTCTA            | GCGCTCTA                  | GCTCCGAC            | GCTCCGAC   | GTCGGAGC  |
| UDI0051    | AACAGGTT            | AACAGGTT                  | ATACCAAG            | ATACCAAG   | CTTGGTAT  |
| UDI0052    | GGTGAACC            | GGTGAACC                  | GCGTTGGA            | GCGTTGGA   | TCCAACGC  |
| UDI0053    | CAACAATG            | CAACAATG                  | CTTCACGG            | CTTCACGG   | CCGTGAAG  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDI0054    | TGGTGGCA            | TGGTGGCA                  | TCCTGTAA            | TCCTGTAA   | TTACAGGA  |
| UDI0055V2  | GTTCGCCG            | GTTCGCCG                  | GCTCATTG            | GCTCATTG   | CAATGAGC  |
| UDI0055    | AGGCAGAG            | AGGCAGAG                  | AGAATGCC            | AGAATGCC   | GGCATTCT  |
| UDI0056V2  | CACGAGCG            | CACGAGCG                  | ATCTGCCA            | ATCTGCCA   | TGGCAGAT  |
| UDI0056    | GAATGAGA            | GAATGAGA                  | GAGGCATT            | GAGGCATT   | AATGCCTC  |
| UDI0057    | TGCGGCGT            | TGCGGCGT                  | CCTCGGTA            | CCTCGGTA   | TACCGAGG  |
| UDI0058    | CATAATAC            | CATAATAC                  | TTCTAACG            | TTCTAACG   | CGTTAGAA  |
| UDI0059    | GATCTATC            | GATCTATC                  | ATGAGGCT            | ATGAGGCT   | AGCCTCAT  |
| UDI0060    | AGCTCGCT            | AGCTCGCT                  | GCAGAACATC          | GCAGAACATC                                       | GATTCTGC  |
| UDI0061    | CGGAACTG            | CGGAACTG                  | CACTACGA            | CACTACGA   | TCGTAGTG  |
| UDI0062    | TAAGGTCA            | TAAGGTCA                  | TGTCGTAG            | TGTCGTAG   | CTACGACA  |
| UDI0063    | TTGCCTAG            | TTGCCTAG                  | ACCACCTTA           | ACCACCTTA  | TAAGTGGT  |
| UDI0064    | CCATTCGA            | CCATTCGA                  | GTTGTCCG            | GTTGTCCG   | CGGACAAC  |
| UDI0065    | ACACTAAG            | ACACTAAG                  | ATCCATAT            | ATCCATAT   | ATATGGAT  |
| UDI0066    | GTGTCGGA            | GTGTCGGA                  | GCTTGCAC            | GCTTGCAC   | GCGCAAGC  |
| UDI0067    | TTCCTGTT            | TTCCTGTT                  | AGTATCTT            | AGTATCTT   | AAGATACT  |
| UDI0068    | CCTTCACC            | CCTTCACC                  | GACGCTCC            | GACGCTCC   | GGAGCGTC  |
| UDI0069    | GCCACAGG            | GCCACAGG                  | CATGCCAT            | CATGCCAT   | ATGGCATG  |
| UDI0070    | ATTGTGAA            | ATTGTGAA                  | TGCATTGC            | TGCATTGC   | GCAATGCA  |
| UDI0071    | ACTCGTGT            | ACTCGTGT                  | ATTGGAAC            | ATTGGAAC   | GTTCCAAT  |
| UDI0072    | GTCTACAC            | GTCTACAC                  | GCCAAGGT            | GCCAAGGT   | ACCTTGGC  |
| UDI0073    | CAATTAAC            | CAATTAAC                  | CGAGATAT            | CGAGATAT   | ATATCTCG  |
| UDI0074    | TGGCCGGT            | TGGCCGGT                  | TAGAGCGC            | TAGAGCGC   | GCGCTCTA  |
| UDI0075    | AGTACTCC            | AGTACTCC                  | AACCTGTT            | AACCTGTT   | AACAGGTT  |
| UDI0076    | GACGTCTT            | GACGTCTT                  | GGTCACCC            | GGTCACCC   | GGTGAACC  |
| UDI0077    | TGCGAGAC            | TGCGAGAC                  | CATTGTTG            | CATTGTTG   | CAACAATG  |
| UDI0078    | CATAGAGT            | CATAGAGT                  | TGCCACCA            | TGCCACCA   | TGGTGGCA  |

| Index Name | i7 Bases in Adapter | i7 Bases for Sample Sheet | i5 Bases in Adapter | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|------------|---------------------|---------------------------|---------------------|--|---|
| UDI0079    | ACAGGGCGC           | ACAGGGCGC                 | CTCTGCCT            | CTCTGCCT   | AGGCAGAG  |
| UDI0080    | GTGAATAT            | GTGAATAT                  | TCTCATTC            | TCTCATTC   | GAATGAGA  |
| UDI0081    | AACTGTAG            | AACTGTAG                  | ACGCCGCA            | ACGCCGCA   | TGCGGCGT  |
| UDI0082    | GGTCACGA            | GGTCACGA                  | GTATTATG            | GTATTATG   | CATAATAC  |
| UDI0083    | CTGCTTCC            | CTGCTTCC                  | GATAGATC            | GATAGATC   | GATCTATC  |
| UDI0084    | TCATCCTT            | TCATCCTT                  | AGCGAGCT            | AGCGAGCT   | AGCTCGCT  |
| UDI0085    | AGGTTATA            | AGGTTATA                  | CAGTTCCG            | CAGTTCCG   | CGGAACTG  |
| UDI0086    | GAACCGCG            | GAACCGCG                  | TGACCTTA            | TGACCTTA   | TAAGGTCA  |
| UDI0087    | CTCACCAA            | CTCACCAA                  | CTAGGCAA            | CTAGGCAA   | TTGCCTAG  |
| UDI0088    | TCTGTTGG            | TCTGTTGG                  | TCGAATGG            | TCGAATGG   | CCATTGCA  |
| UDI0089    | TATCGCAC            | TATCGCAC                  | CTTAGTGT            | CTTAGTGT   | ACACTAAG  |
| UDI0090    | CGCTATGT            | CGCTATGT                  | TCCGACAC            | TCCGACAC   | GTGTCGGA  |
| UDI0091    | GTATGTTC            | GTATGTTC                  | AACAGGAA            | AACAGGAA   | TTCCTGTT  |
| UDI0092    | ACGCACCT            | ACGCACCT                  | GGTGAAGG            | GGTGAAGG   | CCTTCACC  |
| UDI0093    | TACTCATA            | TACTCATA                  | CCTGTGGC            | CCTGTGGC   | GCCACAGG  |
| UDI0094    | CGTCTGCG            | CGTCTGCG                  | TTCACAAT            | TTCACAAT   | ATTGTGAA  |
| UDI0095    | TCGATATC            | TCGATATC                  | ACACGAGT            | ACACGAGT   | ACTCGTGT  |
| UDI0096    | CTAGCGCT            | CTAGCGCT                  | GTGTAGAC            | GTGTAGAC   | GTCTACAC  |

## TruSeq DNA and RNA CD Indexes

Combinatorial dual (CD) index adapters (formerly TruSeq HT).

A-tailing is performed before adapter ligation. For example, the additional A base is in parentheses in the i7 adapter, as follows.

Index 1 (i7) Adapters

(A)GATCGGAAGAGGCACACGTCTGAACCTCCAGTCAC[i7]ATCTCGTATGCCGTCTCTGCTTG

Adapter Trimming

The following sequences are used for adapter trimming.

**Read 1**

AGATCGGAAGAGCACACGTCTGAACCTCCAGTCA

**Read 2**

AGATCGGAAGAGCGTCGTAGGGAAAGAGTGT

**Index 1 (i7) Adapters**

GATCGGAAGAGCACACGTCTGAACCTCCAGTCAC [i7] ATCTCGTATGCCGTCTCTGCTTG

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| D701          | ATTACTCG                  |
| D702          | TCCGGAGA                  |
| D703          | CGCTCATT                  |
| D704          | GAGATTCC                  |
| D705          | ATTCAGAA                  |
| D706          | GAATTCGT                  |
| D707          | CTGAAGCT                  |
| D708          | TAATGCGC                  |
| D709          | CGGCTATG                  |
| D710          | TCCGCGAA                  |
| D711          | TCTCGCGC                  |
| D712          | AGCGATAG                  |

**Index 2 (i5) Adapters**

AATGATACGGCGACCACCGAGATCTACAC [i5] ACACTTTCCCTACACGACGCTTTCCGATCT

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| D501          | TATAGCCT   | AGGCTATA  |
| D502          | ATAGAGGC   | GCCTCTAT  |
| D503          | CCTATCCT   | AGGATAGG  |
| D504          | GGCTCTGA   | TCAGAGCC  |

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| D505          | AGGCAGAAG  | CTTCGCCT  |
| D506          | TAATCTTA   | TAAGATTAA   |
| D507          | CAGGACGT   | ACGTCCTG  |
| D508          | GTACTGAC   | GTCAGTAC  |

## TruSeq Single Indexes

A-tailing is performed before adapter ligation. For example, the additional A base is in parentheses in the i7 adapter, as follows.

### Index 1 (i7) Adapters

(A)GATCGGAAGAGCAGCACAGTCTGAACTCCAGTCAC[i7]ATCTCGTATGCCGTCTCTGCTTG

### Adapter Trimming

The following sequences are used for adapter trimming.

#### Read 1

AGATCGGAAGAGCAGCACAGTCTGAACTCCAGTCA

#### Read 2

AGATCGGAAGAGCGTCGTAGGGAAAGAGTGT

## TruSeq Universal Adapter

5' AATGATACGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTTCCGATCT

### DNA and RNA Index Adapters

Index adapter sequences are six bases as underlined. Enter the six underlined bases in the sample sheet.

The index numbering is not sequential, so indexes 17, 24, and 26 are skipped. Additionally, the bases preceding each index adapter sequence are the same, but the two bases following the index adapter sequence can vary.

#### Index Adapter 1

5' GATCGGAAGAGCAGCACAGTCTGAACTCCAGTCACATCAGATCTCGTATGCCGTCTCTGCTTG

#### Index Adapter 2

5' GATCGGAAGAGCAGCACAGTCTGAACTCCAGTCACCGATGTATCTCGTATGCCGTCTCTGCTTG

#### Index Adapter 3

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~TAGGCATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 4**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GACCAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 5**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~ACAGTGATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 6**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GCCAATATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 7**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~CCAGATCATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 8**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~TTGAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 9**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GATCAGATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 10**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~TAGCTTATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 11**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GGCTACATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 12**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~CTTGTAAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 13**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~AGTCACAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 14**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~AGTCCGTATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 15**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~ATGTCAGAATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 16**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~CCCGTCCGATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 18**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GTCCGCACATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 19**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GTGAAACGATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 20**

5' GATCGGAAGAGCACACGTCTGA~~ACTCCAGTCAC~~GTGGCCTATCTCGTATGCCGTCTCTGCTTG

**Index Adapter 21**5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGTTCGGAATCTCGTATGCCGTCTCTGCTTG**Index Adapter 22**5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACCGTACGTAATCTCGTATGCCGTCTCTGCTTG**Index Adapter 23**5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACGAGTGGATATCTCGTATGCCGTCTCTGCTTG**Index Adapter 25**5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACACTGATATATCTCGTATGCCGTCTCTGCTTG**Index Adapter 27**5' GATCGGAAGAGCACACGTCTGAACTCCAGTCACATTCTTATCTCGTATGCCGTCTCTGCTTG

## TruSeq Amplicon Kits

The TruSeq Amplicon Kits include the following:

- TruSeq Custom Amplicon v1.5
- TruSeq Amplicon Cancer Panel
- TruSeq Custom Amplicon Low Input

**Index 1 (i7) Adapters**

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| A701          | ATCACGAC                  |
| A702          | ACAGTGGT                  |
| A703          | CAGATCCA                  |
| A704          | ACAAACGG                  |
| A705          | ACCCAGCA                  |
| A706          | AACCCCTC                  |
| A707          | CCCAACCT                  |
| A708          | CACCACAC                  |
| A709          | GAAACCCA                  |
| A710          | TGTGACCA                  |
| A711          | AGGGTCAA                  |
| A712          | AGGAGTGG                  |

## Index 2 (i5) Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| A501          | TGAACCTT   | AAGGTTCA  |
| A502          | TGCTAAGT   | ACTTAGCA  |
| A503          | TGTTCTCT   | AGAGAACAA   |
| A504          | TAAGACAC   | GTGTCTTA  |
| A505          | CTAACATCGA                                       | TCGATTAG  |
| A506          | CTAGAACAA  | TGTTCTAG  |
| A507          | TAAGTTCC   | GGAACCTTA   |
| A508          | TAGACCTA   | TAGGTCTA  |

## TruSeq Small RNA

### Adapter Trimming

The following sequence is used for adapter trimming.

TGGAATTCTCGGGTGCCAAGG

### RNA 5' Adapter (RA5)

5' GUUCAGAGUUCUACAGUCCGACGAUC

### RNA 3' Adapter (RA3)

5' TGGAATTCTCGGGTGCCAAGG

### Stop Oligo (STP)

5' GAAUCCACCACGUUCCCGUGG

### RNA RT Primer (RTP)

5' GCCTTGGCACCCGAGAATTCCA

### RNA PCR Primer (RP1)

5' AATGATAACGGCGACCACCGAGATCTACACGTTCAGAGTTCTACAGTCCGA

## RNA PCR Index Primers

5' CAAGCAGAAGACGGCATACGAGAT [6 bases] GTGACTGGAGTTCCCTGGCACCCGAGAATTCCA

### Index Adapters

| Index Name          | Six-Base Sequence in Adapter | Six-Base Sequence for Sample Sheet |
|---------------------|------------------------------|------------------------------------|
| Index 1<br>(RPI1)   | CGTGAT                       | ATCACG                             |
| Index 2<br>(RPI2)   | ACATCG                       | CGATGT                             |
| Index 3<br>(RPI3)   | GCCTAA                       | TTAGGC                             |
| Index 4<br>(RPI4)   | TGGTCA                       | TGACCA                             |
| Index 5<br>(RPI5)   | CACTGT                       | ACAGTG                             |
| Index 6<br>(RPI6)   | ATTGGC                       | GCCAAT                             |
| Index 7<br>(RPI7)   | GATCTG                       | CAGATC                             |
| Index 8<br>(RPI8)   | TCAAGT                       | ACTTGA                             |
| Index 9<br>(RPI9)   | CTGATC                       | GATCAG                             |
| Index 10<br>(RPI10) | AAGCTA                       | TAGCTT                             |
| Index 11<br>(RPI11) | GTAGCC                       | GGCTAC                             |
| Index 12<br>(RPI12) | TACAAG                       | CTTGTA                             |
| Index 13<br>(RPI13) | TTGACT                       | AGTCAA                             |
| Index 14<br>(RPI14) | GGAACT                       | AGTTCC                             |

| <b>Index Name</b>   | <b>Six-Base Sequence in Adapter</b> | <b>Six-Base Sequence for Sample Sheet</b> |
|---------------------|-------------------------------------|---|
| Index 15<br>(RPI15) | TGACAT                              | ATGTCA                                    |
| Index 16<br>(RPI16) | GGACGG                              | CCGTCC                                    |
| Index 17<br>(RPI17) | CTCTAC                              | GTAGAG                                    |
| Index 18<br>(RPI18) | GCGGAC                              | GTCCGC                                    |
| Index 19<br>(RPI19) | TTTCAC                              | GTGAAA                                    |
| Index 20<br>(RPI20) | GGCAC                               | GTGGCC                                    |
| Index 21<br>(RPI21) | CGAAC                               | GTTCG                                     |
| Index 22<br>(RPI22) | CGTACG                              | CGTACG                                    |
| Index 23<br>(RPI23) | CCACTC                              | GAGTGG                                    |
| Index 24<br>(RPI24) | GCTACC                              | GGTAGC                                    |
| Index 25<br>(RPI25) | ATCAGT                              | ACTGAT                                    |
| Index 26<br>(RPI26) | GCTCAT                              | ATGAGC                                    |
| Index 27<br>(RPI27) | AGGAAT                              | ATTCCCT                                   |
| Index 28<br>(RPI28) | CTTTTG                              | CAAAAG                                    |
| Index 29<br>(RPI29) | TAGTTG                              | CAACTA                                    |
| Index 30<br>(RPI30) | CCGGTG                              | CACCGG                                    |

| <b>Index Name</b>   | <b>Six-Base Sequence in Adapter</b> | <b>Six-Base Sequence for Sample Sheet</b> |
|---------------------|-------------------------------------|---|
| Index 31<br>(RPI31) | ATCGTG                              | CACGAT                                    |
| Index 32<br>(RPI32) | TGAGTG                              | CACTCA                                    |
| Index 33<br>(RPI33) | CGCCTG                              | CAGGCG                                    |
| Index 34<br>(RPI34) | GCCATG                              | CATGGC                                    |
| Index 35<br>(RPI35) | AAAATG                              | CATTTT                                    |
| Index 36<br>(RPI36) | TGTTGG                              | CCAACA                                    |
| Index 37<br>(RPI37) | ATTCCG                              | CGGAAT                                    |
| Index 38<br>(RPI38) | AGCTAG                              | CTAGCT                                    |
| Index 39<br>(RPI39) | GTATAG                              | CTATAC                                    |
| Index 40<br>(RPI40) | TCTGAG                              | CTCAGA                                    |
| Index 41<br>(RPI41) | GTCGTC                              | GACGAC                                    |
| Index 42<br>(RPI42) | CGATTA                              | TAATCG                                    |
| Index 43<br>(RPI43) | GCTGTA                              | TACAGC                                    |
| Index 44<br>(RPI44) | ATTATA                              | TATAAT                                    |
| Index 45<br>(RPI45) | GAATGA                              | TCATTC                                    |
| Index 46<br>(RPI46) | TCGGGA                              | TCCCCGAA                                  |

| Index Name          | Six-Base Sequence in Adapter | Six-Base Sequence for Sample Sheet |
|---------------------|------------------------------|------------------------------------|
| Index 47<br>(RPI47) | CTTCGA                       | TCGAAG                             |
| Index 48<br>(RPI48) | TGCCGA                       | TCGGCA                             |

## TruSeq Targeted RNA Expression

### Index 1 (i7) Adapters

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| R701          | ATCACG                    |
| R702          | CGATGT                    |
| R703          | TTAGGC                    |
| R704          | TGACCA                    |
| R705          | ACAGTG                    |
| R706          | GCCAAT                    |
| R707          | CAGATC                    |
| R708          | ACTTGA                    |
| R709          | GATCAG                    |
| R710          | TAGCTT                    |
| R711          | GGCTAC                    |
| R712          | CTTGTA                    |
| R713          | AGTCAA                    |
| R714          | AGTTCC                    |
| R715          | ATGTCA                    |
| R716          | CCGTCC                    |
| R717          | GTAGAG                    |
| R718          | GTCCGC                    |
| R719          | GTGAAA                    |
| R720          | GTGGCC                    |

| i7 Index Name | i7 Bases for Sample Sheet |
|---------------|---------------------------|
| R721          | GTTTCG                    |
| R722          | CGTACG                    |
| R723          | GAGTGG                    |
| R724          | GGTAGC                    |
| R725          | ACTGAT                    |
| R726          | ATGAGC                    |
| R727          | ATTCCCT                   |
| R728          | CAAAAG                    |
| R729          | CAACTA                    |
| R730          | CACCGG                    |
| R731          | CACGAT                    |
| R732          | CACTCA                    |
| R733          | CAGGCG                    |
| R734          | CATGGC                    |
| R735          | CATTTT                    |
| R736          | CCAACA                    |
| R737          | CGGAAT                    |
| R738          | CTAGCT                    |
| R739          | CTATAC                    |
| R740          | CTCAGA                    |
| R741          | GACGAC                    |
| R742          | TAATCG                    |
| R743          | TACAGC                    |
| R744          | TATAAT                    |
| R745          | TCATTC                    |
| R746          | TCCCCA                    |
| R747          | TCGAAG                    |
| R748          | TCGGCA                    |

## Index 2 (i5) Adapters

Refer to [Index 2 \(i5\) Orientation on page 1](#) for more information on how to enter i5 bases on the sample sheet in forward or reverse complement orientation.

| i5 Index Name | i5 Bases for Sample Sheet in Forward Orientation | i5 Bases for Sample Sheet in Reverse Complement Orientation |
|---------------|--|---|
| A501          | TGAACCTT   | AAGGTTCA  |
| A502          | TGCTAAGT   | ACTTAGCA  |
| A503          | TGTTCTCT   | AGAGAACCA   |
| A504          | TAAGACAC   | GTGTCTTA  |
| A505          | CTAATCGA   | TCGATTAG  |
| A506          | CTAGAACCA  | TGTTCTAG  |
| A507          | TAAGTTCC   | GGAACCTTA   |
| A508          | TAGACCTA   | TAGGTCTA  |

# Process Controls for TruSeq Kits

TruSeq DNA PCR-Free, TruSeq Nano DNA, TruSeq RNA (v2/LT/HT), and TruSeq Exome kits include the following process controls.

**i** | Current versions of Sequencing Analysis Viewer (SAV) do not show metrics for control sequences.

## CTE2 - 150bp

```
ATCCTGCAGATGCATCCAGTACTAGTATGGCCCGGGGATCCTACGTTCAAATGCAGCGAGCTCGTATAACCCTTAAG  
AGTTGCTTTGGTAAGTTGCAAATCGAAGTTAGATTGAGTTCTACGTCGAGCGGCCGCGAT
```

## CTE2 - 250bp

```
ATCCTGCAGATGCATCCAGTACTAGTATGGCCCGGGGATCCTATCTGTCAAAACCGCTAATGTCCGTTCTAACGACCGT  
CTGGAGAACACTGCCATCAGTGTGTTAACCTTTTACAGGTCCTCCGATTACACTGAGAAGCTGACCACAC  
CTGCTAGAAGATGGAGGTATGCAGCCGTTAGTAGGAGTAATACTACCCAGCTATAACCCTAAACGTAGGGCAGATGG  
CGGCCGCGAT
```

## CTE2 - 350bp

```
ATCCTGCAGATGCATCCAGTACTAGTATGGCCCGGGGATCCTAGAGACCATTCGCATTGAGACTCCAAGGGTTC  
TGCACAACCTATGCACCTATTAGATCATTTGTTCTACGAAGCCTGGACTGCATTACATATTACAACCAACATGAGA  
AGAGCGGAATAGATGGCCGGATGTTGGCTTGATATATTGTGAGGAGCATTGCGAACCTAGAGCTGTCCGGTCAA  
ATAACCCCCTACAATAAGTGTAAATGTCATGGATAATCAAAGACTAAGGGAGGGCTTTATAGAAGGCGTGAGGTGAT  
GCTATCCCCCTCTGAAGACGCGGCCGCGAT
```

## CTE2 - 450bp

```
ATCCTGCAGATGCATCCAGTACTAGTATGGCCCGGGGATCCGTATCGTTCTAATTGAGTTAACGGTTGGATACCA  
CTTTGAGGCATGTAATATGGTACTGAGCTCGGCACAGGGCTCAAATTGCATCATTAAATGTCTCCGATGTGGCTATATG  
TCATGGATAAAGGCAGCCCCCTATATCTTTGGCAGCATGGGTCCATCAAAGCAATTATTCAAGGTCTTAATGAC  
CTCCACAGCTCTAACGTAATTGTCATCTGGCTTGCTGTACTTACTTCCTCCATGAAAAAAAGTGTGATAATGCTCATA  
ATGCTGCCAGCAATTCCCTCCCTCAAGACTATTCTGGCTCCTGGTACTTAAAAACAGGGCTAGAGTATGGCTG  
CTGACAAAATTGCACTCTAACGCTAGCTAGGTCTCTGGCCGCGAT
```

## CTE2 - 550bp

```
ATCCTGCAGATGCATCCAGTACTAGTATGGCCCGGGGATCCGTAGCTATCGTCGAGAAAGTTAGTAGACACACAG  
GACCCAGGCGTGCAAGTCAATTCTAGCTGACTACACCGATTCTGGTAAAGAGCCTATGCCACCCCTTATTTAGAGAA  
AAAAAACACACCTCTAATGTGTTGGCACTAGAAAAAGCTAACTACCTAGTCCGTTCTGGACGACTCATTGGAAATA  
ACATACCCCCACTGTGATTAAGACTGGCACTGTCCTAATGCTTCAATAGGTTGGCTATGTGATTCCCTCTG
```

GCAAACTTATAGAGGACAAGCAGAATAAACCAATTCAAGGTCGTGAGCTGAAGGCCTGGCCTGCCTGACAGTAAATTA  
TGAGCATGCTTGCCTTCATGGTGGATATTCACAGCTGAAAGTGGTATTGGCATTCTGAGGACACAACGAGGAA  
ATCTGATAAAATACGGCCACCTGAAGTCTAGCTCGGAGTTAACAAATTACCACGTTAGAGCGGCCGCGAT

**CTE2 - 650bp**

ATCCTGCAGATGCATCCAGTACTAGTATGCCCGGGGATCCGCTCGCACTTAGCCTGTTAAGGGTCGCGCTCGTCTA  
GTCTGTGCTGTTGCCTGGATAGTAAATTATCATGGTACAAACTTTAAGAGCCAGTTAAATGGAGATGGATTAAAAAGA  
GTTATTGTAAGTCTCCCAGGTGTCTTACCAACAGATTGCCCTGGCCTGACCCCTAAATGCAATTGG  
GATTCCCTTTAGTTGCTTCATAAAATGTACCAGCGCAGTAAAAAAAGCACAAAGTATATTGTTATGTAACACTA  
TCTCATTTGCACTGGTTACATGGCAGCTTCAGACTGACTAAAACACTTTCCACCATGGTCAAAGATCAACAGAA  
CTGGGCCAACAAAGCAATTTCATGTGGTCTAACTACCAACTTATTGAGTTAAGTTACTTTAGGTTAAAATCA  
CAGCAGTTTCCACACCTCCCAGAGATACTTCAGGGTGGCTAAACTGGCTAAAGGCTCCGGACCAACCCTG  
TTCTTATGGTGCCTGTCCTGACAACCGCGTAAGGCATGGAAATTAGCTATTATCCGATCGTTATATGGCGTG  
CGGCCGCGAT

**CTE2 - 750bp**

ATCCTGCAGATGCATCCAGTACTAGTATGCCCGGGGATCCTGGACCGTTAATTCAATATCGAAGTAGCAGGTTGTT  
GCCCGCCTGATGTTGCCACTACTGCTCATGACAGTTTTAGGCAATGCAAACACTACTATTGATATTTCCTCAAG  
TACAGTTGAGGGTACTCCTTAACTGATTCTGAGCCTGTACGGGAGCATTAGGTACTGATGAGTAGGAGTTGAG  
CTTCACAAATTACCAAGGTAAGCCAAATTATTCTGCTGGACAGGTCCACCTCACATGGGTCTGCTAAATATATTA  
AAAGAGGGATTTCTTGCTGTATTGAGCCCAGTATATCTGTTACTTACAGTAGTGTGCTTACAGGTTGAG  
CTTTGCTCCTACAGAACACCCTGTAAATTGAGGTCGCTTAGAGTCAAACCATGAGCGCTCTGCA  
TCTACCAACTATCGCTAACGATTCTGGTTGGTTAACGAGCAACTCCATTATCTCTAGCATACCCTCCCAGG  
CTACATGTAGAAAGAGATCTGTTGGCCCCACTATTTCACCCAGGGAAAGCCTACTTAGTTAGCTGCCAGAGAT  
TTCTGTGTCATGTAGAACGTCATCCACTTTAACACCAGGAGGTGGATGTGGGCCAGGAAATATGCAATAACGATACG  
GGACTCTAACAGTGAECTCGGCCGCGAT

**CTE2 - 850bp**

ATCCTGCAGATGCATCCAGTACTAGTATGCCCGGGGATCCTTAAGTCGTGTCCTCTCCTACGATTTGTAACGATG  
GATATTCTTCTAAACTTAAACAAACAGTGGAGAGATGTTGTTGTGGAACGACGCTTAGCCTACCGAGGAAGA  
TCCAGACTACAATAGAATATGTGCCAAACTCTCGCAACTTCAGCAGCAAAAGGATATTATTGACATAACCTCCTCA  
CAAAAGTACACAAATGGCTAAATAACAGAGCCCCTTTTACTAGGGAAATGGTGGATGTGGACTTAGAATTAAAGA  
TAATAAGCTTGTGATCCAAATGTTATTCCATGTGAGGGACATTAAATTGAGTAACCTTGCCACATACCCTCAG  
AGTCCATTCTCTAAACTTGAAGCTCCGCCCTTTTACGCACATTAGGCTTCAATTACGGTCAATGGTCTGAAAGATT  
GGGAGCTTGAAGAGTAATAAGAACCATCACAAAAGGAACCCAGAAGCCGGAGTGTCTACCAAAAAATTCAAGGGT  
TAAAAAAAGTGACATTTCTCTGTTTACACATGATTGAGTGTGCTGGTCCACGTCCAGCTCAAAGGTAGG  
TTCATGGTTCTCAAAGTTGCTTCTGTCAGAATTGAGCCACATCAGGTAGGTGGGAAGTAGATCAGTGAGGATGCTT  
CACATGTGTGGGCACTGGGAACAGAACGTCATAAACACGAGCTGACGAGGGCCGCTATGAAAAAAAGATTCTCTG  
GCCCTGGCGCTCCGCACTAAAGAATTGATGACCGTGCAGGCCGCGAT

**CTE1 - 123bp**

GATCCTACGTTCAAATGCAGCGAGCTCGTATAACCCTTAAGAGTTGCTTTGGTAAGTTGCAAATCGAAGT  
TTTAGATTGAGTTCTACGTCAGCGGCCGCGATATCCTGCAGATGCA

**CTE1 - 223bp**

GATCCTATCTGCAAAACGCTAATGTCCGTTCTAAGACCGTCTGGAGAACACTTGCCCATCAGTGCTTTAACCTT  
TTTCACAGGTCCCTCCGATTACACTGAGAAGCTGACCACACCTGCTAGAAGATGGAGGTATGCAGCCCGTTAGTAGGA  
GTAATACTACCCAGCTTATAACCCTCAAACGTAGGGCAGATGGCGGCCGCGATATCCTGCAGATGCA

**CTE1 - 323bp**

GATCCTAGAGACCATTCGCGATTCCATGAGACTCCAAGGGTTCTGCACAACCTATGCACCTCTATTAGATCATTGTGTT  
TACGAAGCCTGGACTGCATTACATATTACAACCAACATGAGAAGAGCGGAATAGATGGCCGGATGTTGGTGGCTTGA  
TATATTGTGAGGAGCATTGCGAACCTAGAGCTGTCCGGTCAAATAACCCCTCACAAATAAGTGTAAATGTCATGGATAA  
TCAAAAGACTAAGGGAGGGCTTTATAGAAGGCGTGAGGTATGCTATCCCCCTCTGAAGACGCGGCCGCGATATCCTGC  
AGATGCA

**CTE1 - 423bp**

GATCCGTATACGTTCTAATTGTAGTTAACGGTTGGATACCACCTTGAGGCATGTAATATGGTACTGAGCTTGGCACA  
GGGCTCAAATTGCATCATTAATGTCTCGATGTGGCTATATGTCATGGATAAAGGCAGCCCCCTATATCTTTTGTG  
GCAGCATGGGTCCATCAAAGCAATTATTCAAGGGCTTAATGACCTCCACAGCTCTAACGTAATTCTATCTGGCTTGCCT  
GTACTTACTTCCTCCATGAAAAAAAGTGTGATAATGCTCATATGCTGCCAGCAATTCCCTCCCTCTCAAGACTATT  
CTGGCTTCCCTGGGTACTAAAAACAGGGCTTAGAGTATGGCTGCTGACAAAATTGCACTCTAACGCTAGCTTAGGTCTT  
CTGCAGCGCGATATCCTGCAGATGCA

**CTE1 - 523bp**

GATCCGTTAGCTATCGTCGAGAAAGTTAGTAGACACACAGGACCCAGGCAGTCAGTCATTTCAGCTGACTACACC  
GATTCTGGTAAAGAGCCTATGCCACCCCTATTTAGAGAAAAAAACACACCTCTAACATGTGTTGGCACTAGAAAA  
AGCTAACTACCTAGTCCGTTCTGGACGACTTCATTGGGATAAACATACCCCCACTGTGATTAAGACTGGCACTGTCCT  
AATGCTTCTCAATAGGTTGGCTCATGTGATTCCCTCTGGCAAACCTATAGAGGACAAGCAGAATAAACCAATTCA  
AGGTGTTGAGCTGAAGGCCTGGCTGCCTGACAGTTAATTATGAGCATGTCTGCCCTCATGGTGGATATTACAGC  
TGAAAGTGGTATTGGCATTTTCTGAGGACACAACGAGGAAATCTGATAAAATACGCCACCTGAAGTCTAGCTCGGAG  
TTAACATTACACGTTAGAGCGGCCGCGATATCCTGCAGATGCA

**CTE1 - 623bp**

GATCCGCTCGCACTAGCCTGTTAAGGGTTCGCGCTCGTAGTCTGTGCTGGCTGGATAGTAAATTATCATGGTA  
CAAACTTAAGAGCCAGTTAAATGGAGATGGATTAAAAAGAGTTATTGTAAGTCTCCCCAGGTGTCATTAAATAT  
CCCAACAGATTGCCCTGGCCTGACCCCTAAATGCAATTGGATTCCCTTTAGTTGCTTCATTAAGTACCGAGC

GCAGTAAAAAAAGCACAAAGTATTTGTTATGTAACACTACTATCTCATTGCACTGGTTACATGGCAGCTCAGACTGA  
 CTAAAACACTACCTTCCCACCATGGTTCAAAGATCAACAGAACTGGGCCAACAAAGCAATTTCATGTGGCTAAC  
 TACCAACTTATTATGAGTTAAGTTACTTAGGTTAAACATCACAGCAGTTCCACACCTCCAGAGATACTT  
 CAGGGTGGCTAAACTTGGCTAAAGGCTCCGGACCAACCCCTGTTCTTATGGTCTGTGCTGACAACCGCGTAAG  
 GCATGGAAATTCTAGCTATTATCCGATCGTTATATGGCGTGCGGCCGATATCCTGCAGATGCA

**CTE1 - 723bp**

GATCCTTGGACCCTTAATTCATATATCGAAGTAGCAGGTTGTTGCCCTGATGTTGCCACTACTGCTCATGACAGT  
 TTTTTAGGCAATGCAAACACTACTATTGATATTTCAGTACAGTTGAGGGTACTCCTTAACTGATTCTCTGA  
 GCCTGTACGGGAGCATTAGGTACTGATGTTAGGAGGTTGAGCTTCACAAATTCAACAGGTAAGGCCAAATTATTT  
 TGCTTGGACAGGTCCACCTCACATGGTCTGCTAATATATTAAAGAGGGATTTCCTGCTGTATTGCAGCCAGTAT  
 ATCTGTTACTTACAGTAGTAGTCCATTATTGCTGGCCTAGGGCTTTGCTCCTACACGAACACCACTGTAAAATTG  
 AGGTGTCCTTAGAGTCAAACCATTCATGGAGCGCTGTGCATCTACCAACTATCGCTAACGATTCACTGGTGGTT  
 AAGTGGAGGCAACTCCATTATCTCTAGCATAACCTCCAGGCTACATGTAGAAAGAGATCTGTTGGCCCACTATT  
 TTTCACCCAGGGAAAGCTACTTGTAGCTAGGAAATATGTCAATAACGATAACGGACTTCTAACAGTGACTCGCGCGATATCCTGC  
 AGATGCA

**CTE1 - 823bp**

GATCCTTAAGTCGTGTCCTCTCCTACGATCTGTGAACGATGGATATTCTTCTAAACTTAAACAAACAGTGGAGA  
 GATGTTGTTGTTGGAACGACGCTTAGCCTACCGAGGAAGATCCAGACTACAATAGAATATGTCAGCCAAACTCTCCG  
 CAACTCAGCAGCAAAAGGATATTGACATAACCTCCTCACAAAAAGTACACAAATGGCTAAATAACAGAGCCCTC  
 TTTTACTAGGAAATGGTGGATGTTAGAATTAAAGATAATAAGCTCTGATCCAATGTTATTCCATGTGA  
 GGGACATTAAATTGAGTAACCTTGCCACATACCTCTCCAGAGTCCATTCTCTAAACTGAAAGCTCCGCCCCTTTT  
 ACGCACATTAGGCTTCAATTACGGTCAATGGTCTGAAGATTGGAGCTTGAAGAGTAATAAGAACATCACAAAAA  
 GGAACCCAGAAGCCGGAGTGTCTACCAAAAAATTCAAGGGTTAAAAAAAGTGACATTCTCCTGTTTACACAT  
 GATTTGAATGCTGATGGTCCACGTCCAGCTAAAGGTAGGTTCATGGTCTCCAAAGTTGCTTCTGTCAGAATTG  
 AGCCACATCAGGTAGGTGGGAAGTAGATCAGTGAGGATGCTTCACATGTGTGGGACTGGGAACAGAAATGCTCAATAA  
 CACGAGCTGACGAGGGCCCGCTATGAAAAAAAGATTCTCTGTGCCCTGGCCCTCCGACTAAAGAATTGATGACC  
 GTGCAGCGATATCCTGCAGATGCA

**CTA - 150bp**

GGGGGATCCTACGTTCAAATGCAGCGAGCTCGTATAACCTTAAGAGTTGCTTTGGTAAGTTGCAAATCG  
 AAGTTTAGATTGAGTTCTACGTCAGCGCCGATATCCTGCAGATGCATCCAGTACTAGTATGCC

**CTA - 250bp**

GGGGGATCCTATCTGTCACCGCTAAATGTCAGCGAGCTGGAGAACACTGCCATCAGTGCTTTGAAC  
 CTTTTTCACAGGTCCCTCGATTACACTGAGAAGCTGACCACACCTGCTAGAAGATGGAGGTATGCAGCCGTTAGT

AGGAGTAATACTACCCAGCTTATAACCCTAAACGTAGGGCAGATGGCGGCCGCGATATCCTGCAGATGCATCCAGTACT  
AGTATGGCCC

### CTA - 350bp

GGGGGATCCTAGAGACCATT CGCATTCCATGAGACTCCAAGGGTTCTGCACAAC TTATGCACCTCTATTAGATCATTGT  
GTTCTACGAAGCCTGGACTGCATTACATATT CACAACCAACATGAGAAGAGCGGAATAGATGCCGGATGTTGGCT  
TTGATATATTGTGAGGAGCATT CGAACCCCTAGAGCTGTCGGTCAAATAACCCCTCACAAATAAGTGTAAATGTCATGGG  
ATAATCAAAAGACTAAGGGAGGGCTTTATAGAAGGCGTAGGGTCACTGCTATCCCCCTCTGAAGACGCCCGCGATATC  
CTGCAGATGCATCCAGTACTAGTATGGCCC

### CTA - 450bp

GGGGGATCCGTACGTTCTAATTGTAGTTAACGGTTGGATACCAC TTTGAGGCATGTAATATGGTACTGAGCTTCGG  
CACAGGGCTCAAATTGCATCATTAATGTCTCCGATGTGGCTATATGTCATGGATAAAGGCAGCCCCCTATATCTTTTT  
TGTGGCAGCATGGTCCATCAAAGCAATTATT CAGGGTCTTAATGACCTCCACAGCTCTAACGTAATT CATCTGGCTTT  
GCCTGTACTTACTCCCTCCATGAAAAAAAGTGTGATAATGCTCATAATGCTGCCAGCAATTCCCTCCCTCTCAAGAC  
TATTCTGGCTCCTGGGTACTTAAAACAGGGCTTAGAGTATGGCTGCTGACAAAATTGCACTCTAACGCTAGCTTAGG  
TCTTCTGCCGCCGATATCCTGCAGATGCATCCAGTACTAGTATGGCCC

### CTA - 550bp

GGGGGATCCGTAGCTATCGTCGAGAAAGTTAGTAGACACACAGGACCCAGGCGTGCAAGTCATTTCAGCTGACTA  
CACCGATTCTGGTAAAAGAGCCTATGCCACCCTTATTTAGAGAAAAAAACCACACCTCTAATGTGTTGGCACTAG  
AAAAAGCTAACTACCTAGTCCGTTCTGGACGACTTCATTGGAAATAACATACCCCCACTGTGATTAAGACTGGCACTG  
TCCTAATGCTTCTTCAATAGGTTGGCTCATGTGTGATTCCCTCTGGCAAACCTATAGAGGACAAGCAGAATAAACCAA  
TTCAAGGTCGTTAGCTGAAGGCCTGGCCTGACAGTTAATTATGAGCATGTCTGCCCTCATGGTGATATTCA  
CAGCTGAAAGTGGTATTGGCATT TTTCTGAGGACACAACGAGGAATCTGATAAAATACGCCACCTGAAGTCTAGCTC  
GGAGTTAACAAATTACACGTTAGAGCGGCCGCGATATCCTGCAGATGCATCCAGTACTAGTATGGCCC

### CTA - 650bp

GGGGGATCCGCTCGCACTTAGCCTGTTAACGGGTTCGCGCTCGTAGTCTGTGCTGTTGCCCTGGATAGTAAATTATCAT  
GGTACAAACTTTAAGAGCCAGTTAAATGGAGATGGATTAAAAGAGTTATTGTAAGTCTCCCAGGTGTGTCATTAA  
ATATCCAAACAGATTGCCCTGGCCTGACCCCTAAATGCAATTGGGATTCCCTTTAGTTGCTTCACTAAATGTAC  
CAGCGCAGTAAAAAGCACAAAGTATATTGTTATGTAACTCACTATCTCATTGCACTGGTTACATGGCAGCTCAGA  
CTGACTAAA ACTACACTTTCCACCAGGTTCAAAGATCAACAGAACTGGCCAACAAAGCAATT TTTCATGTGGTC  
TAACTACCAACTATTATGAGTTAAGTTACTTTAGGTTAAAATCACAGCAGTTCCCTCACACCTCCCAGAGATA  
CTTTCAAGGGTGGCTAAACTGGCTAAAGGCTCCGGACCAACCCCTGTTCTTATGGTGCTTGTGTCCTGACAACCGCG  
TAAGGCATGGAAATT CAGTATTATCCGATCGTTATATGGCGTGC GGCGCGATATCCTGCAGATGCATCCAGTACT  
AGTATGGCCC

**CTA - 750bp**

GGGGGATCCTGGACCGTTAACATATATCGAAGTAGCAGGTTGCCCTGATGTTGCCACTACTGCTCATGA  
 CAGTTTTTAGGCAATGCAAACACTACTATTGATATTTTCCAAGTACAGTTGAGGTACTCCTATACTGATTCTT  
 CTGAGCCTGTACGGGAGCATTAGGTACTGATGAGTAGGAGTTGAGCTCACAAATTACCCAGTAAGGCCAATTAT  
 TTTCTGCTGGACAGGTCCACCTCACATGGCTGTCTAATATATTAAAAGAGGGATTTCTTGCTGTATTGCAGCCA  
 GTATATCTGTTACTTACAGTAGTAGTCCATTATTGCTGGCCTAGGGCTTTGCTCCTACACGAACACCACCTGTAAAA  
 TTTGAGGTCGTCCTTAGAGTCAAACCAATTGAGCGCTCTGTGCATCTACCAACTATCGCTAACGATTCACTGGTTG  
 GTTTAAGTGGAGGCAACTCCATTATCTCTAGCATAACCTCCCAGGCTACATGTAGAAAGAGATCTGTTGGGCCCACT  
 ATTTTTCACCCAGGGAAAGCCTACTTTAGTTAGCTGCCAGAGATTTCTGTCATGTAGAAAGTCATCCACTTAA  
 CACCAGGAGGTGGATGTGGGCCAGGAAATATGTCATAACGATAACGGACTCTAACAGTGAECTCGGGCCGATATC  
 CTGCAGATGCATCCAGTACTAGTATGGCC

**CTA - 850bp**

GGGGGATCCTTAAGTCGTGTCCTTCCTACGATCTTGTGAACGATGGATATTTCTAAACTTAAACAAACAGTG  
 GAGAGATGTTGTTGTCGGAACGACGCTTACGCCACCGAGGAAGATCCAGACTACAATAGAATATGTGGCCAAACTC  
 TCCGCAACTTCAGCAGCAAAAGGATTATTGACATAACCTCCTCACAAAAGTACACAAATGGCTAAATAACAGAGCC  
 CCTCTTTTACTAGGGAAATGGTGGATGTGGACTTCTAGAATTAAAGATAATAAGCTCTGATCCCAATGTTATTCCAT  
 GTGAGGGACATTAATTGAGTAACCTTGCCACATACCCCTCTCCAGAGTCATTCTCTAAACTTGAGCTCCGCCCC  
 TTTTACGCACATTAGGCTTCCAATTACGGTCAATGGTCTGAAGATTGGAGCTTTGAAGAGTAATAAGAACCATCACA  
 AAAAGGAACCCAGAAGCCGGGAGTGTCTACCAAAAAAATTCAAGGGTTAAAAAAAGTGACATTTCTCTGTTTTAC  
 ACATGATTTGAATGCTGATGGTCCACGTCCAGCTCTAAAGGTAGGTTCATGGTCTCCAAAGTTGCTTCTGTCAGA  
 ATTGAGCCACATCAGGTAGGTGGGAAGTAGATCAGTGAGGATGCTCACATGTGTGGGACTGGGAACAGAACGTTCA  
 ATAACACGAGCTGACGAGGGCCCGCTATGAAAAAAAGATTCTCTGTGCCCCCTGGCGCCTCCGACTAAAGAATTGAT  
 GACCGTGCAGCGATATCCTGCAGATGCATCCAGTACTAGTATGGCC

**CTL - 150bp**

AGTATGGCCCGGGGGATCCTACGTTCAAATGCAGCGAGCTCGTATAACCTTAAGAGTTGCTTTTGTGTAAG  
 TTGCAAATCGAAGTTAGATTGAGTTCTACGTCGAGCGGCCGCGATATCCTGCAGATGCATCCAGTACA

**CTL - 250bp**

AGTATGGCCCGGGGGATCCTATCTGTCAAAACCGCTAATGTCGTTCTAAGACCGTCTGGAGAACACTTGCCCACAGT  
 GCTTTGAACCTTTTACAGGTCCCTCCGATTACACTGAGAAGCTGACCACACCTGCTAGAAGATGGAGGTATGCA  
 GCCCGTTAGTAGGAGTAATACTACCCAGCTATAACCTCAAACGTAGGGCAGATGGCGCCGCGATATCCTGCAGATGC  
 ATCCAGTACA

**CTL - 350bp**

AGTATGGCCCGGGGGATCCTAGAGACCATTGCGATTCCATGAGACTCCAAGGGTTCTGCACAACTATGCACCTCTATT  
 AGATCATTGTGTTCTACGAAGCCTGGACTGCATTACATATTACAACCAACATGAGAAGAGCGGAATAGATGGCCGGATG

TTTGGTGGCTTGATATATTGTGAGGAGCATTGCGAACCTAGAGCTGTCCGGTCAAATAACCCCTCACAAATAAGTGTA  
ATGTCATGGATAATCAAAGACTAAGGGAGGGCTTTATAGAAGGCAGGTCATGCTATCCCCCTGAAGACGCGG  
CCGCGATATCCTGCAGATGCATCCAGTACA

**CTL - 450bp**

AGTATGCCCGGGGATCCGTATCGTTCTAATTGTAGTTAACGGTGGATACCACCTTGAGGCATGTAATATGGTAC  
TGAGCTTCGGCACAGGGCTCAAATTGCATCATTAATGTCCTCGATGTGGCTATATGTCATGGATAAAGGCAGCCCCCTA  
TATCTTTTTGTGGCAGCATGGTCCATCAAAGCAATTATTCAAGGGCTTAATGACCTCCACAGCTCTAACGTAATT  
ATCTGGCTTGCGCTGTACTTACTTCCTCCATGAAAAAAAGTGTGATAATGCTCATATGCTGCCAGCAATTCCCTCCC  
TTCTCAAGACTATTCTGGCTCCTGGGTACTTAAAACAGGGCTTAGAGTATGGCTGCTGACAAAATTGCACTCTAACG  
CTAGCTTAGGTCTCTGGGCCCGCATATCCTGCAGATGCATCCAGTACA

**CTL - 550bp**

AGTATGCCCGGGGATCCGTAGCTATCGTCGAGAAAGTTAGTAGACACACAGGACCCAGGCAGTCAAGTCATTT  
CAGCTGACTACACCGATTGGTTAAAAGAGCCTATGCCACCCCTATTTAGAGAAAAAAACACACCTCTAATGTGT  
TGGGCACTAGAAAAGCTAACTACCTAGTCCGTTCTGGACACTTCATTGGAAATAACATACCCCCCAGTGTGATTAAG  
ACTGGCACTGTCCTAATGCTTCTCAATAGGTTGGCTCATGTGTGATTCCCTGGCAAACCTATAGAGGACAAGCAG  
AATAAACCAATTCAAGGTGTTAGCTGAAGGCCTGGCCTGACAGTTAATTATGAGCATGTCTGCCCTCATGG  
TGGATATTACAGCTGAAAGTGGTATTGGCATTGGTCTGAGGACACAACGAGGAAATCTGATAAAATACGGCACCTGA  
AGTCTAGCTCGGAGTTAACATTACACGTTAGAGCGGCCCGATATCCTGCAGATGCATCCAGTACA

**CTL - 650bp**

AGTATGCCCGGGGATCCGCTCGCAGTTAGCCTGTTAAGGGTTCGGCTCGCTAGTCCTGCTGTTGCCCTGGATAGT  
AAATTATCATGGTACAAACTTTAAGAGCCAGTTAAATGGAGATGGATTAAAAGAGTTATGTAAGTCTCCCCAGGT  
GTGTCATTAAATATCCAACAGATTGCCCTGGCCTGACCCCTAAATGCAATTGGATTCCCTTAGTTGCTTCAT  
TAAAATGTACAGCGCAGTAAAAAGCACAAAGTATATTGTTATGTAACTCACTATCTCATTTGCACTGGTTACATGG  
CAGCTTCAGACTGACTAAAACACTACCTTCCCACCATGGTCAAAGATCAACAGAACTGGCCAACAAAAGCAATT  
TCATGTGGTCTAACTACCAACTTATTGAGTTAAGTTAGGTTAAAATCACAGCAGTTCCACACCT  
CCCAGAGATACTTCAGGGTGGCTAAACTGGCTAAAGGCTCCGGACCAACCCCTGTTCTTATGGTCTGTCCT  
GACAACCGCGTAAGGCATGGAAATTCACTGTTATGGCGTGCAGATGCAGATGCATCCAGTACA  
ATCCAGTACA

**CTL - 750bp**

AGTATGCCCGGGGATCCTGGACCGTTAATTCAATATCGAAGTAGCAGGTTGTTGCCCTGATGTTGCCACTAC  
TTGCTCATGACAGTTTTAGGCAATGCAAACACTACTATTGATATTTTCCAAGTACAGTTGAGGGTACTCCTTAT  
ACTGATTCTCTGAGCCTGTACGGGAGCATTAGGTACTGATGTAGTAGGAGTTGAGCTTCACAAATTCAACAGGTAAGC  
CCAAATTATTTCTGCTGGACAGGTCCACCTCACATGGTCTGCTAAATATAAAAGAGGGATTTCCTGCTGTA  
TTGCAGCCAGTATCTGTTACTTACAGTAGTCCATTATTGCTGGCTAGGGCTTTGCTCCTACACGAACACCA

CTCTGTAAAATTGAGGTCGCCTTAGAGTCAAACCATTGAGCGCTCTGTGCATCTACCAACTATCGCTAACGATT  
CACTTGGTTGGTTAAGTGGAGGCAACTCCATTATCTTCTAGCATAACCTCCCAGGCTACATGTAGAAAGAGATCTGTT  
GGGCCCACTATTTTCACCCAGGGAGCCTACTTAGTTAGCTGCCAGAGATTTCTGTGTATGTAGAAGTCAT  
CCACTTTAACACCAGGAGGTGGATGTGGGCCAGGAATATGTCAATAACGATAACGGGACTTCTAACAGTGACTCGCGG  
CCGCGATATCCTGCAGATGCATCCAGTACA

### CTL - 850bp

AGTATGGCCGGGGATCCTTAAGTCGTGCCTCTCCTACGATCTTGTGAACGATGGATATTTCTTCTAAACTTAA  
ACAAACAGTGGAGAGATGTTGTTGTGTGGAACGACGCTTAGCCTACCGAGGAAGATCCAGACTACAATAGAATATGTG  
GCCAAAACCTCTCCGCAACTTCAGCAGCAAAAGGATATTATTGACATAACCTCCTCACAAAAAGTACACAAATGGCTAAA  
TAACAGAGCCCCCTTTTACTAGGGAAATGGTGGATGTGGACTTTAGAATTAGATAATAAGCTCTGATCCAATG  
TTATTCCATGTGAGGGACATTAAATTGAGTAACCTTGCCACATACCCCTCTCCAGAGTCCATTCTCTAAACTTGAAG  
CTCCGCCCTTTACGCACATTAGGCTTCAATTACGGTCAATGGCTTGAAGATTGGAGCTTGAAGAGTAATAAG  
AACCATCACAAAAAGGAACCCAGAAGCCGGAGTGTCTACCAAAAAATTCAAGGGTTAAAAAAAGTGACATTCTCC  
TGTTTTTACACATGATTTGAATGCTGATGGGCCACGTCCAGCTCTAAAGGTAGGTTCATGGTTCTCCAAAGTTGCTT  
TCTTGTCAAGATTGAGCCACATCAGGTAGGTGGGAAGTAGATCAGTGAGGATGCTTCACATGTGTGGCACTGGAAACA  
GAATGCTTCAATAACACGAGCTGACGAGGGCCCGCTATGAAAAAAAGATTCTCTGTGCCCTGGCCCTCCGCACCTTA  
AAGAATTGATGACCGTGCAGCGATATCCTGCAGATGCATCCAGTACA

## Legacy Kits

This section lists legacy kits that are no longer available for purchase.

### NexTera DNA Sample Prep Kit (Epicentre Biotechnologies)

(Obsolete)

#### Transposon Sequences

5' -GCCTCCCTCGGCCATCAGAGATGTGTATAAGAGACAG

5' -GCCTTGCCAGCCGCTCAGAGATGTGTATAAGAGACAG

#### Adapters (Showing Optional Bar Code)

5' -AATGATAACGGCGACCACCGAGATCTACACGCCCTCGGCCATCAG

5' -CAAGCAGAACGGCATACGAGAT [barcode] CGGTCTGCCTGCCAGCCGCTCAG -3'

#### PCR Primers

5' -AATGATAACGGCGACCACCGA

5' -CAAGCAGAACGGCATACGA

## TruSeq Synthetic Long-Read DNA

(Obsolete)

Double-stranded DNA adapter containing long-range PCR primer binding site, sequencing primer binding site, and end marker sequence.

#### Long Reads Adapter

5' CCGGTTCTTCCCTGCCAACCTATCTTCGTCGGCAGCGTCAGATGTGTATAAGAGACAGTACGCTTGCAT

## TruSeq DNA Methylation

#### Adapter Trimming

The following sequence is used for adapter trimming.

Read 1

AGATCGGAAGAGCACACGTCTAAC

## Read 2

AGATCGGAAGAGCGTCGTAGGGAA

## TruSeq Universal Adapter

5' AATGATAACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTCTCCGATCT

## Index PCR Primers

5' CAAGCAGAAGACGGCATACGAGAT [6 bases] GTGACTGGAGTTCAGACGTGTGCTCTCCGATCT

## Index Adapters

| Index Name | Six-Base Sequence for Sample Sheet |
|------------|------------------------------------|
| Index 1    | ATCACG                             |
| Index 2    | CGATGT                             |
| Index 3    | TTAGGC                             |
| Index 4    | TGACCA                             |
| Index 5    | ACAGTG                             |
| Index 6    | GCCAAT                             |
| Index 7    | CAGATC                             |
| Index 8    | ACTTGA                             |
| Index 9    | GATCAG                             |
| Index 10   | TAGCTT                             |
| Index 11   | GGCTAC                             |
| Index 12   | CTTGTA                             |

## TruSeq Ribo Profile

### Adapter Trimming

The following sequence is used for adapter trimming.

AGATCGGAAGAGCACACGTCT

### 3' Adapter

5' AGATCGGAAGAGCACACGTCT

## Forward PCR Primer

5' ATGATAACGGCGACCACCGAGATCTACACGTTCAGAGTTCTACAGTCCGACG

## Index PCR Primers

5' CAAGCAGAAGACGGCATACGAGAT [6 bases] GTGACTGGAGTTCAGACGTGTGCTTCCGATCT

## Index Adapters

| i7 Index Name | Six-Base Sequence for Sample Sheet |
|---------------|------------------------------------|
| A001          | ATCACG                             |
| A002          | CGATGT                             |
| A003          | TTAGGC                             |
| A004          | TGACCA                             |
| A005          | ACAGTG                             |
| A006          | GCCAAT                             |
| A007          | CAGATC                             |
| A008          | ACTTGA                             |
| A009          | GATCAG                             |
| A010          | TAGCTT                             |
| A011          | GGCTAC                             |
| A012          | CTTGTG                             |

## Oligonucleotide Sequences for Genomic DNA

(Obsolete)

### Adapters

5' P-GATCGGAAGAGCTCGTATGCCGTCTCTGCTTG

5' ACACTCTTCCTACACGACGCTTCCGATCT

### PCR Primers

5' AATGATAACGGCGACCACCGAGATCTACACTCTTCCTACACGACGCTTCCGATCT

5' CAAGCAGAAGACGGCATACGAGCTTCCGATCT

### Genomic DNA Sequencing Primer

5' ACACTTTCCCTACACGACGCTCTTCCGATCT

## Oligonucleotide Sequences for Paired End (PE) DNA

(Obsolete)

### PE Adapters

5' P-GATCGGAAGAGCGGGTCAGCAGGAATGCCGAG

5' ACACTTTCCCTACACGACGCTCTTCCGATCT

### PE PCR Primer 1.0

5' AATGATAACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTCTTCCGATCT

### PE PCR Primer 2.0

5' CAAGCAGAACGACGGCATACGAGATCGGTCTGGCATTCTGCTGAACCGCTCTTCCGATCT

### PE Read 1 Sequencing Primer

5' ACACTTTCCCTACACGACGCTCTTCCGATCT

### PE Read 2 Sequencing Primer

5' CGGTCTCGGCATTCTGCTGAACCGCTCTTCCGATCT

## Oligonucleotide Sequences for the Multiplexing Sample Prep Oligo-Only Kit

(Obsolete)

### Multiplexing Adapters

5' P-GATCGGAAGAGCACACGTCT

5' ACACTTTCCCTACACGACGCTCTTCCGATCT

### Multiplexing PCR Primer 1.0

5' AATGATAACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTCTTCCGATCT

### Multiplexing PCR Primer 2.0

5' GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT

### Multiplexing Read 1 Sequencing Primer

5' ACACTTTCCCTACACGACGCTCTTCCGATCT

### Multiplexing Index Read Sequencing Primer

5' GATCGGAAGAGCACACGTCTGAACCTCCAGTCAC

### Multiplexing Read 2 Sequencing Primer

5' GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT

## PCR Primer Index Sequences 1–12

### PCR Primer, Index 1

5' CAAGCAGAACGGCATACGAGATCGTGATGTGACTGGAGTTC

### PCR Primer, Index 2

5' CAAGCAGAACGGCATACGAGATACTCGGTGACTGGAGTTC

### PCR Primer, Index 3

5' CAAGCAGAACGGCATACGAGATGCCTAAGTGACTGGAGTTC

### PCR Primer, Index 4

5' CAAGCAGAACGGCATACGAGATTGGTCAGTGACTGGAGTTC

### PCR Primer, Index 5

5' CAAGCAGAACGGCATACGAGATCACTGTGTGACTGGAGTTC

### PCR Primer, Index 6

5' CAAGCAGAACGGCATACGAGATATTGGCGTGACTGGAGTTC

### PCR Primer, Index 7

5' CAAGCAGAACGGCATACGAGATGATCTGGTGACTGGAGTTC

### PCR Primer, Index 8

5' CAAGCAGAACGGCATACGAGATTCAAGTGTGACTGGAGTTC

### PCR Primer, Index 9

5' CAAGCAGAACGGCATACGAGATCTGATCGTGACTGGAGTTC

### PCR Primer, Index 10

5' CAAGCAGAACGGCATACGAGATAAGCTAGTGACTGGAGTTC

### PCR Primer, Index 11

5' CAAGCAGAACGGCATACGAGATGTAGCCGTGACTGGAGTTC

### PCR Primer, Index 12

5' CAAGCAGAAGACGGCATACTGAGATTACAAGGTGACTGGAGTTC

## Oligonucleotide Sequences for the Small RNA v1 and v1.5 Kits

(Obsolete)

### RT Primer

5' CAAGCAGAAGACGGCATACTGA

### 5' RNA Adapter

5' GUUCAGAGUUCUACAGUCCGACGAUC

### 3' RNA Adapter

5' P-UCGUAUGCCGUCUUUCUGCUUGUidT

### Small RNA v1.5 3' Adapter

5' /5rApp/ATCTCGTATGCCGTCTCTGCTTG/3ddC/

### Small RNA PCR Primer 1

5' CAAGCAGAAGACGGCATACTGA

### Small RNA PCR Primer 2

5' AATGATAACGGCGACCACCGACAGGTTCAGAGTTCTACAGTCCGA

### Small RNA Sequencing Primer

5' CGACAGGTTCAGAGTTCTACAGTCCGACGATC

# Revision History

| Document                       | Date              | Description of Change  |
|--------------------------------|-------------------|--|
| Document #<br>100000002694 v20 | January<br>2025   | <p>Added Index 2 base orientation information for MiSeq i100 Series.</p> <p>Removed statements indicating that the read orientation of the Index 2 sequence is dictated by whether the Index 2 primer is grafted to the flow cell or in solution.</p>  |
| Document #<br>100000002694 v19 | October<br>2023   | <p>Corrected sequences for the following Illumina Unique Dual Indexes, Set A:</p> <ul style="list-style-type: none"> <li>• UDP0069V3, UDP0070V3, UDP0071V3, UDP0072V3, UDP0073V3, UDP0074V3, UDP0075V3, UDP0076V3.</li> </ul> <p>Added clarification for TSO 500 ctDNA v2 and TSO 500 HT kits.</p>   |
| Document #<br>100000002694 v18 | September<br>2023 | <p>Added adapter sequences for Illumina Unique Dual Indexes Set A-D and Illumina Unique Dual Indexes, LT.</p> <p>Added clarification for entering the Index 2 (i5) bases on the sample sheet in forward or reverse orientation.</p> <p>Added clarification of adapter trimming sequences usage.</p> <p>Added clarification for V2 indexes used with IDT for Illumina UD Indexes Set C and Set D.</p> |

| Document                       | Date             | Description of Change  |
|--------------------------------|------------------|--|
| Document #<br>100000002694 v17 | February<br>2023 | <p>Updated references to NextSeq to include NextSeq 1000. Added NovaSeq X Series to the i5 sample sheet v2. For IDT for Illumina Indexes, Plate D/Set 4, corrected UDP0289, UDP0290, UDP0291, and UDP0301 sequences for i5 bases for sample sheets of the following instruments:</p> <ul style="list-style-type: none"> <li>• iSeq 100</li> <li>• NovaSeq 6000 with v1.5 reagent kits</li> <li>• MiniSeq</li> <li>• NextSeq 500/550</li> <li>• HiSeq 3000/4000/X</li> <li>• NextSeq 1000/2000 (sample sheet v1)</li> </ul> <p>Added A-tailing information for TruSeq workflows. Added information on the workflows used to prime and read the i5 index (Index 2). Added adapter trimming sequences for TruSight DNA Enrichment, TruSight Tumor 170 and TruSight Oncology 500, TruSight Oncology ctDNA, and TruSight RNA Pan-Cancer Panel kits.</p> |
| Document #<br>100000002694 v16 | April 2021       | Added HTML format.   |
| Document #<br>100000002694 v15 | February<br>2021 | <p>Corrected i7 bases in adapters sequences for TruSeq indexes. Added the following sequences and bases:</p> <ul style="list-style-type: none"> <li>• V1 indexes for UDI0015, UDI0016, UDI0055, UDI0056, UDP0252, UDP0258, UDP0289, UDP0290, UDP0291, and UDP0301.</li> <li>• TruSight Tumor 15 i7 indexes.</li> <li>• i5 bases in adapters for IDT for Illumina UD Indexes.</li> </ul>  |
| Document #<br>100000002694 v14 | July 2020        | <p>Added information in support of the NovaSeq 6000 Reagent Kit v1.5. Added adapter sequencing for IDT for Illumina-PCR UD Indexes Set 1, 2, 3, and 4.</p>   |

| Document                       | Date             | Description of Change   |
|--------------------------------|------------------|---|
| Document #<br>100000002694 v13 | June 2020        | <p>Replaced UDI0015, UDI0016, UDI0055, UDI0056, UDP0252, UDP0258, UDP0289, UDP0290, UDP0291, and UDP0301 with V2 versions.</p> <p>Updated Nextera section to reflect new kit names.</p> <p>Added NextSeq 2000 to the IDT for Illumina-TruSeq DNA and RNA UD Indexes table.</p>  |
| Document #<br>100000002694 v12 | March 2020       | <p>Added information for HiSeq X.</p> <p>Added information for NextSeq 2000.</p> <p>Added TruSight Oncology 500 adapter sequences.</p> <p>Corrected the following information:</p> <ul style="list-style-type: none"> <li>• IDT for Illumina Nextera DNA UD Indexes, Plate D adapter sequences for i5 bases iSeq, MiniSeq, NextSeq, HiSeq 3000/4000.</li> <li>• TruSight Tumor 170 UP08 i7 and i5 index names.</li> <li>• TruSight Tumor 170 UP08 and UP09 i7 adapter sequences.</li> </ul> |
| Document #<br>100000002694 v11 | April 2019       | <p>Added adapter sequences for IDT for Illumina Nextera DNA UD Indexes Sets B, C, and D.</p>  |
| Document #<br>100000002694 v10 | February<br>2019 | <p>Added sequences for AmpliSeq UD Indexes for Illumina and AmpliSeq CD Indexes.</p> <p>Renamed the following sections to include RNA:</p> <ul style="list-style-type: none"> <li>• <i>IDT for Illumina TruSeq DNA and RNA UD Indexes</i></li> <li>• <i>TruSeq DNA and RNA CD Indexes</i></li> </ul> <p>Corrected TruSeq Small RNA sequences needed for sample sheet.</p>   |

| Document                        | Date             | Description of Change   |
|---------------------------------|------------------|---|
| Document #<br>1000000002694 v09 | November<br>2018 | <p>Updated the document structure:</p> <ul style="list-style-type: none"> <li>• Consolidated sections by kit.</li> <li>• Consolidated index adapter tables for TruSight DNA Enrichment and Nextera DNA indexes.</li> <li>• Divided the <i>IDT for Illumina UD Indexes</i> section between the Nextera and TruSeq sections.</li> <li>• Reorganized TruSight RNA Pan-Cancer Panel information for clarity and consistency.</li> <li>• Reorganized TruSeq Small RNA index adapters into a table.</li> <li>• Moved TruSeq Synthetic Long-Read DNA, TruSeq DNA Methylation, and TruSeq Ribo Profile sequences to <i>Legacy Kits</i>.</li> </ul> <p>Added the following sequences and bases:</p> <ul style="list-style-type: none"> <li>• Adapter trimming sequences where applicable.</li> <li>• Bases for [E/H/N/S]517, a Nextera DNA i5 adapter.</li> <li>• The i7 bases in adapter for TruSeq UD Indexes.</li> <li>• The universal adapter sequence for TruSeq DNA Methylation.</li> <li>• For TruSight Tumor 170, the i5 sample sheet bases for systems that do not require an i5 reverse complement.</li> </ul> <p>Added the following miscellaneous information:</p> <ul style="list-style-type: none"> <li>• The adapter sequences for TruSight RNA Pan-Cancer Panel and TruSeq Single Indexes can vary.</li> <li>• Current versions of Sequencing Analysis Viewer do not show metrics for control sequences</li> </ul> |
| Document #<br>1000000002694 v08 | October<br>2018  | Added IDT for Illumina Nextera DNA UD Indexes.  |
| Document #<br>1000000002694 v07 | June 2018        | Added the iSeq 100 Sequencing System, which requires a reverse complement.  |
| Document #<br>1000000002694 v06 | February<br>2018 | Added TruSight Tumor 170 indexes.   |
| Document #<br>1000000002694 v05 | February<br>2018 | Updated IDT for Illumina to include 96 indexes.   |

| Document                          | Date              | Description of Change  |
|-----------------------------------|-------------------|--|
| Document #<br>100000002694<br>v04 | January<br>2018   | Added AmpliSeq for Illumina Panels.  |
| Document #<br>100000002694<br>v03 | October<br>2017   | Corrected i5 bases for Nextera DNA CD Indexes for use with MiSeq and HiSeq systems.<br>Reorganized TruSeq sections.  |
| Document #<br>100000002694 v02    | September<br>2017 | Added adapters for Nextera DNA CD Indexes.   |
| Document #<br>100000002694 v01    | February<br>2016  | Added explanation of reverse complements in the sample sheet.<br>Corrected i5 adapter names for TruSight One to E502–E505.<br>Added adapters for TruSight RNA Pan-Cancer, TruSeq DNA Methylation, and TruSeq Ribo Profile.<br>Added MiniSeq, which requires a reverse complement.  |
| Document #<br>100000002694 v00    | October<br>2015   | Added information for the following TruSight kits:<br><ul style="list-style-type: none"> <li>• TruSight Cardio</li> <li>• TruSight Myeloid Sequencing Panel</li> <li>• TruSight One</li> <li>• TruSight Rapid Capture</li> <li>• TruSight Tumor 15</li> <li>• TruSight Tumor 26</li> </ul> Created a TruSeq Amplicon section with information for the following kits:<br><ul style="list-style-type: none"> <li>• TruSeq Custom Amplicon 1.5</li> <li>• TruSeq Amplicon Cancer Panel</li> <li>• TruSeq Custom Amplicon Low Input</li> </ul> Marked obsolete kits as obsolete.<br>Grouped legacy kit information in new section titled Legacy Kits.<br>Reformatted and reorganized the contents.<br>Assigned document # 100000002694. |



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