



For Research Use Only.
Not for use in diagnostic procedures.

KAPA UDI Primer Mixes

Unique Dual-Indexed Primers used with the KAPA Universal Adapter or KAPA Universal UMI Adapter for sample barcoding.

 **Version 03**
Content version: September 2021

Store at +2°C to +8°C


Product Name and Pack Size	Catalog #
KAPA UDI Primer Mixes, 1-96 reactions	09134336001
KAPA UDI Primer Mixes, 97-192 reactions	09329838001
KAPA UDI Primer Mixes, 193-288 reactions	09329846001
KAPA UDI Primer Mixes, 289-384 reactions	09329854001

Contents

Component	Catalog #	Quantity	Amount
1 x 96 well plate	09134336001	1	1 reaction per well
1 x 96 well plate	09329838001	1	1 reaction per well
1 x 96 well plate	09329846001	1	1 reaction per well
1 x 96 well plate	09329854001	1	1 reaction per well

Storage and Stability

- In the lyophilized format store at +2°C to +8°C. The kit components are stable at +2°C to +8°C through the expiration date printed on the label.
- Upon resuspension store at -15°C to -25°C. The kit components are stable at -15°C to -25°C through the expiration date printed on the label.
- The product can withstand five freeze-thaw cycles without a negative impact to reagent stability and performance.

 Store primer plate in an upright orientation only.

Warnings and Precautions

Employ best laboratory practices to avoid cross contamination of indexed primer pairs.

Application

The KAPA Unique Dual-Indexed (UDI) Primer Mixes are to be used with the KAPA Universal Adapter or the KAPA Universal UMI Adapter to generate uniquely labeled libraries from individual biological DNA samples. Sample indexing allows for pooling of libraries prior to target capture or cluster generation, to enable multiplexed sequencing. Each KAPA UDI Primer Mix is a pre-mixed combination of forward and reverse primers. The primers contain a non-redundant (unique), 8-nucleotide index designed to mitigate index misalignment ("index hopping") on Illumina sequencers that employ patterned flow cells and exclusion amplification chemistry. Only 1 plate, catalog #09134336001, is for use with the KAPA HyperPETE Workflow.

Number of Reactions

Four separate kits (plates), each kit contains 96 unique dual indexes for a total of 384 possible library preparations. Each well contains enough material for one reaction.

How to Use this Product

Guidance on use in the *KAPA HyperCap Workflow* can be found in the *KAPA HyperChoice*, *KAPA HyperExplore*, and *KAPA HyperExome Instructions for Use*. Guidance on use in the *KAPA HyperPETE Workflow* can be found in the *KAPA HyperPETE Somatic Tissue DNA Workflow*, *KAPA HyperPETE Somatic Plasma cfDNA Workflow*, *KAPA HyperPETE Tissue RNA Fusion Transcript Workflow*, and *KAPA HyperPETE Germline DNA Workflow Instructions for Use*.

	1	2	3	4	5	6	7	8	9	10	11	12
A	UDI-P 01	UDI-P 09	UDI-P 17	UDI-P 25	UDI-P 33	UDI-P 41	UDI-P 49	UDI-P 57	UDI-P 65	UDI-P 73	UDI-P 81	UDI-P 89
B	UDI-P 02	UDI-P 10	UDI-P 18	UDI-P 26	UDI-P 34	UDI-P 42	UDI-P 50	UDI-P 58	UDI-P 66	UDI-P 74	UDI-P 82	UDI-P 90
C	UDI-P 03	UDI-P 11	UDI-P 19	UDI-P 27	UDI-P 35	UDI-P 43	UDI-P 51	UDI-P 59	UDI-P 67	UDI-P 75	UDI-P 83	UDI-P 91
D	UDI-P 04	UDI-P 12	UDI-P 20	UDI-P 28	UDI-P 36	UDI-P 44	UDI-P 52	UDI-P 60	UDI-P 68	UDI-P 76	UDI-P 84	UDI-P 92
E	UDI-P 05	UDI-P 13	UDI-P 21	UDI-P 29	UDI-P 37	UDI-P 45	UDI-P 53	UDI-P 61	UDI-P 69	UDI-P 77	UDI-P 85	UDI-P 93
F	UDI-P 06	UDI-P 14	UDI-P 22	UDI-P 30	UDI-P 38	UDI-P 46	UDI-P 54	UDI-P 62	UDI-P 70	UDI-P 78	UDI-P 86	UDI-P 94
G	UDI-P 07	UDI-P 15	UDI-P 23	UDI-P 31	UDI-P 39	UDI-P 47	UDI-P 55	UDI-P 63	UDI-P 71	UDI-P 79	UDI-P 87	UDI-P 95
H	UDI-P 08	UDI-P 16	UDI-P 24	UDI-P 32	UDI-P 40	UDI-P 48	UDI-P 56	UDI-P 64	UDI-P 72	UDI-P 80	UDI-P 88	UDI-P 96

Fig. 1: Layout of the KAPA UDI Primer Mixes 1-96 (Plate 1).

	1	2	3	4	5	6	7	8	9	10	11	12
A	UDI-P 97	UDI-P 105	UDI-P 113	UDI-P 121	UDI-P 129	UDI-P 137	UDI-P 145	UDI-P 153	UDI-P 161	UDI-P 169	UDI-P 177	UDI-P 185
B	UDI-P 98	UDI-P 106	UDI-P 114	UDI-P 122	UDI-P 130	UDI-P 138	UDI-P 146	UDI-P 154	UDI-P 162	UDI-P 170	UDI-P 178	UDI-P 186
C	UDI-P 99	UDI-P 107	UDI-P 115	UDI-P 123	UDI-P 131	UDI-P 139	UDI-P 147	UDI-P 155	UDI-P 163	UDI-P 171	UDI-P 179	UDI-P 187
D	UDI-P 100	UDI-P 108	UDI-P 116	UDI-P 124	UDI-P 132	UDI-P 140	UDI-P 148	UDI-P 156	UDI-P 164	UDI-P 172	UDI-P 180	UDI-P 188
E	UDI-P 101	UDI-P 109	UDI-P 117	UDI-P 125	UDI-P 133	UDI-P 141	UDI-P 149	UDI-P 157	UDI-P 165	UDI-P 173	UDI-P 181	UDI-P 189
F	UDI-P 102	UDI-P 110	UDI-P 118	UDI-P 126	UDI-P 134	UDI-P 142	UDI-P 150	UDI-P 158	UDI-P 166	UDI-P 174	UDI-P 182	UDI-P 190
G	UDI-P 103	UDI-P 111	UDI-P 119	UDI-P 127	UDI-P 135	UDI-P 143	UDI-P 151	UDI-P 159	UDI-P 167	UDI-P 175	UDI-P 183	UDI-P 191
H	UDI-P 104	UDI-P 112	UDI-P 120	UDI-P 128	UDI-P 136	UDI-P 144	UDI-P 152	UDI-P 160	UDI-P 168	UDI-P 176	UDI-P 184	UDI-P 192

Fig. 2: Layout of the KAPA UDI Primer Mixes 97-192 (Plate 2).

	1	2	3	4	5	6	7	8	9	10	11	12
A	UDI-P 193	UDI-P 201	UDI-P 209	UDI-P 217	UDI-P 225	UDI-P 233	UDI-P 241	UDI-P 249	UDI-P 257	UDI-P 265	UDI-P 273	UDI-P 281
B	UDI-P 194	UDI-P 202	UDI-P 210	UDI-P 218	UDI-P 226	UDI-P 234	UDI-P 242	UDI-P 250	UDI-P 258	UDI-P 266	UDI-P 274	UDI-P 282
C	UDI-P 195	UDI-P 203	UDI-P 211	UDI-P 219	UDI-P 227	UDI-P 235	UDI-P 243	UDI-P 251	UDI-P 259	UDI-P 267	UDI-P 275	UDI-P 283
D	UDI-P 196	UDI-P 204	UDI-P 212	UDI-P 220	UDI-P 228	UDI-P 236	UDI-P 244	UDI-P 252	UDI-P 260	UDI-P 268	UDI-P 276	UDI-P 284
E	UDI-P 197	UDI-P 205	UDI-P 213	UDI-P 221	UDI-P 229	UDI-P 237	UDI-P 245	UDI-P 253	UDI-P 261	UDI-P 269	UDI-P 277	UDI-P 285
F	UDI-P 198	UDI-P 206	UDI-P 214	UDI-P 222	UDI-P 230	UDI-P 238	UDI-P 246	UDI-P 254	UDI-P 262	UDI-P 270	UDI-P 278	UDI-P 286
G	UDI-P 199	UDI-P 207	UDI-P 215	UDI-P 223	UDI-P 231	UDI-P 239	UDI-P 247	UDI-P 255	UDI-P 263	UDI-P 271	UDI-P 279	UDI-P 287
H	UDI-P 200	UDI-P 208	UDI-P 216	UDI-P 224	UDI-P 232	UDI-P 240	UDI-P 248	UDI-P 256	UDI-P 264	UDI-P 272	UDI-P 280	UDI-P 288

Fig. 3: Layout of the KAPA UDI Primer Mixes 193-288 (Plate 3).

	1	2	3	4	5	6	7	8	9	10	11	12
A	UDI-P 289	UDI-P 297	UDI-P 305	UDI-P 313	UDI-P 321	UDI-P 329	UDI-P 337	UDI-P 345	UDI-P 353	UDI-P 361	UDI-P 369	UDI-P 377
B	UDI-P 290	UDI-P 298	UDI-P 306	UDI-P 314	UDI-P 322	UDI-P 330	UDI-P 338	UDI-P 346	UDI-P 354	UDI-P 362	UDI-P 370	UDI-P 378
C	UDI-P 291	UDI-P 299	UDI-P 307	UDI-P 315	UDI-P 323	UDI-P 331	UDI-P 339	UDI-P 347	UDI-P 355	UDI-P 363	UDI-P 371	UDI-P 379
D	UDI-P 292	UDI-P 300	UDI-P 308	UDI-P 316	UDI-P 324	UDI-P 332	UDI-P 340	UDI-P 348	UDI-P 356	UDI-P 364	UDI-P 372	UDI-P 380
E	UDI-P 293	UDI-P 301	UDI-P 309	UDI-P 317	UDI-P 325	UDI-P 333	UDI-P 341	UDI-P 349	UDI-P 357	UDI-P 365	UDI-P 373	UDI-P 381
F	UDI-P 294	UDI-P 302	UDI-P 310	UDI-P 318	UDI-P 326	UDI-P 334	UDI-P 342	UDI-P 350	UDI-P 358	UDI-P 366	UDI-P 374	UDI-P 382
G	UDI-P 295	UDI-P 303	UDI-P 311	UDI-P 319	UDI-P 327	UDI-P 335	UDI-P 343	UDI-P 351	UDI-P 359	UDI-P 367	UDI-P 375	UDI-P 383
H	UDI-P 296	UDI-P 304	UDI-P 312	UDI-P 320	UDI-P 328	UDI-P 336	UDI-P 344	UDI-P 352	UDI-P 360	UDI-P 368	UDI-P 376	UDI-P 384

Fig. 4: Layout of the KAPA UDI Primer Mixes 289-384 (Plate 4).

Pooling/Multiplexing Guidelines

As a rule, choose primer mixes as highlighted by the boxes in Figure 2 to take advantage of the color-balanced indexes. This will prevent registration failure and laser color complexity issues during sequencing and de-multiplexing. Figure 2 details the recommended two-plexing combinations that are fully color-balanced.

See the detailed suggestions below:

- Pooling two samples (two-plex):
 - Figure 2 demonstrates the recommended two-plex combinations that are fully color-balanced based on the plate layout in Figure 1 (all combinations indicated by the gray boxes, e.g. A1 + B1, C1 + D1, etc.).
- Pooling three to eight samples (three to eight-plex):
 - Use any of the recommended two-plex combinations with any other index in the column (all combinations indicated by colored box e.g. three-plex: A1 + B1 + C1, four-plex: A1 + B1 +C1 +D1, etc.).
- Pooling nine or more samples:
 - Any number of additional libraries may be multiplexed with any of the color-balanced combinations listed below to obtain pools of any plexity.
 - It is recommended to use column groups of indexes (e.g. colored box 1, 2 etc.).

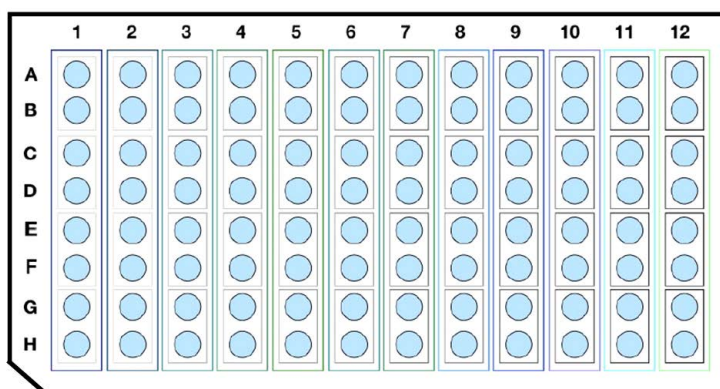


Fig. 2: Recommendations for two-plex (by pairs in grayscale boxes) and eight-plex (by columns in blue and green boxes) pooling. Note that the notched corner is on the bottom left of the plate. This directs the correct orientation of the plate with A1 positioned in the top left of the plate.

			P7 Index Sequence	P5 Index Sequence	
Plate	Well	KAPA UDI Primer Mix	All Illumina Instruments	*NovaSeq 6000 v1.0, NextSeq 2000, MiSeq/Dx, HiSeq 2000/2500	**NovaSeq 6000 v1.5 **NextSeq 500/550/550Dx MiniSeq, iSeq100, HiSeq 3000/4000/X
1	A1	UDI-P 01	TGGATCGA	ACCTAGCT	AGCTAGGT
1	B1	UDI-P 02	CAAGCTAG	GTTCGATC	GATCGAAC
1	C1	UDI-P 03	GTACCAAG	CATGGTTC	GAACCATG
1	D1	UDI-P 04	ACGTTGGA	TGCAACCT	AGGTTGCA
1	E1	UDI-P 05	TCGTGGTA	AGCACCAT	ATGGTGCT
1	F1	UDI-P 06	CTACAACG	GATGTTGC	GCAACATC
1	G1	UDI-P 07	GTTCAAGG	CAAGTTCC	GGAAC TTG
1	H1	UDI-P 08	ACCTGGAA	TGGACCTT	AAGGTCCA
1	A2	UDI-P 09	TCTTAGCG	AGAATCGC	GCGATTCT
1	B2	UDI-P 10	CTCCGATA	GAGGCTAT	ATAGCCTC
1	C2	UDI-P 11	GTCCTACT	CAGGATGA	TCATCCTG
1	D2	UDI-P 12	ACTTCGTC	TGAAGCAG	CTGCTTCA
1	E2	UDI-P 13	TCTACAGG	AGATGTCC	GGACATCT
1	F2	UDI-P 14	CTCGTGAA	GAGCACTT	AAGTGCTC
1	G2	UDI-P 15	GTTCGGAT	CAAGCCTA	TAGGCTTG
1	H2	UDI-P 16	ACCTAAGC	TGGATTCC	CGAATCCA
1	A3	UDI-P 17	GTTGACTG	CAACTGAC	GTCAGTTG
1	B3	UDI-P 18	ACCAGTCA	TGGTCAGT	ACTGACCA
1	C3	UDI-P 19	TACCGGAA	ATGGCCTT	AAGGCCAT
1	D3	UDI-P 20	CGTTAAGG	GCAATTCC	GGAATTGC
1	E3	UDI-P 21	GCTATGTC	CGATACAG	CTGTATCG
1	F3	UDI-P 22	ATCGCACT	TAGCGTGA	TCACGCTA
1	G3	UDI-P 23	GCATTCTT	CGTGAAGA	TCTCACG
1	H3	UDI-P 24	ATGTCCTC	TACAGGAG	CTCCTGTA
1	A4	UDI-P 25	GGATGATC	CCTACTAG	CTAGTAGG
1	B4	UDI-P 26	AAGCAGCT	TTCGTCCA	TCGACGAA
1	C4	UDI-P 27	TGCTATCG	ACGATAGC	GCTATCGT
1	D4	UDI-P 28	CATCGCTA	GTAGCGAT	ATCGCTAC
1	E4	UDI-P 29	TCCTGAGT	AGGACTCA	TGAGTCTT
1	F4	UDI-P 30	CTTCAGAC	GAAGTCTG	CAGACTTC
1	G4	UDI-P 31	GATCCTTC	CTAGGAAG	CTTCTAG
1	H4	UDI-P 32	AGTTCCTT	TCGAAGGA	TCCTTCGA
1	A5	UDI-P 33	TAGGCAAC	ATCCGTTG	CAACGGAT
1	B5	UDI-P 34	CGAATGGT	GCTTACCA	TGGTAAGC
1	C5	UDI-P 35	TCACCAGA	AGTGGTCT	AGACCACT
1	D5	UDI-P 36	CTGTTGAG	GACAACTC	GAGTTGTC
1	E5	UDI-P 37	TCAGCTCA	AGTCGAGT	ACTCGACT
1	F5	UDI-P 38	CTGATCTG	GACTAGAC	GTCTAGTC
1	G5	UDI-P 39	GATGGAAC	CTACCTTG	CAAGGTAG
1	H5	UDI-P 40	AGCAAGGT	TCGTTCCA	TGGAACGA
1	A6	UDI-P 41	TGTCAGCT	ACAGTCGA	TCGACTGT
1	B6	UDI-P 42	CACTGATC	GTGACTAG	CTAGTCAC
1	C6	UDI-P 43	GTTACGTG	CAATGCAC	GTGCATTG
1	D6	UDI-P 44	ACCGTACA	TGGCATGT	ACATGCCA
1	E6	UDI-P 45	GCAACGTA	CGTTGCAT	ATGCAACG
1	F6	UDI-P 46	ATGGTACG	TACCATGC	GCATGGTA
1	G6	UDI-P 47	GTGACAGT	CACTGTCA	TGACAGTG
1	H6	UDI-P 48	ACAGTGAC	TGTCCTG	CAGTGACA
1	A7	UDI-P 49	GATTGGTC	CTAACCAG	CTGGTTAG
1	B7	UDI-P 50	AGCCAACT	TCGGTTGA	TCAACCGA
1	C7	UDI-P 51	GCATCTTG	CGTAGAAC	GTCTACCG
1	D7	UDI-P 52	ATGCTCCA	TACGAGGT	ACCTCGTA
1	E7	UDI-P 53	GTCTTCAG	CAGAAGTC	GACTTCTG
1	F7	UDI-P 54	ACTCCTGA	TGAGGACT	AGTCTCTA
1	G7	UDI-P 55	GCATTCGT	CGTAAGCA	TGCTTACG
1	H7	UDI-P 56	ATGCCTAC	TACGGATG	CATCCGTA

1	A8	UDI-P 57	GAGTCATG	CTCAGTAC	GTA CTGAG
1	B8	UDI-P 58	AGACTGCA	TCTGACGT	ACGTCAGA
1	C8	UDI-P 59	GGA ACTGA	CCTTGACT	AGTCAAGG
1	D8	UDI-P 60	AAGGTCAG	TTCCAGTC	GACTGGAA
1	E8	UDI-P 61	GTGTATCG	CACATAGC	GCTATGTG
1	F8	UDI-P 62	ACACGCTA	TGTGCGAT	ATCGCACA
1	G8	UDI-P 63	TCGACGAA	AGCTGCTT	AAGCAGCT
1	H8	UDI-P 64	CTAGTAGG	GATCATCC	GGATGATC
1	A9	UDI-P 65	GTGTCTGA	CACAGACT	AGTCTGTG
1	B9	UDI-P 66	ACACTCAG	TGTGAGTC	GACTCACA
1	C9	UDI-P 67	GCCTTATC	CGGAATAG	CTATTCCG
1	D9	UDI-P 68	ATTCCGCT	TAAGGCGA	TCGCCTTA
1	E9	UDI-P 69	TGATCGGT	ACTAGCCA	TGGCTAGT
1	F9	UDI-P 70	CAGCTAAC	GTCGATTG	CAATCGAC
1	G9	UDI-P 71	GAACATGG	CTTG TACC	GGTACAAG
1	H9	UDI-P 72	AGGTGCAA	TCCACGTT	AACGTGGA
1	A10	UDI-P 73	GGTGACAA	CCACTGTT	AACAGTGG
1	B10	UDI-P 74	AACAGTGG	TTGTCACC	GGTGACAA
1	C10	UDI-P 75	TGCACTTC	ACGTGAAG	CTTCACGT
1	D10	UDI-P 76	CATGTCCT	GTACAGGA	TCCTGTAC
1	E10	UDI-P 77	GTACAGCT	CATGTCGA	TCGACATG
1	F10	UDI-P 78	ACGTGATC	TGCACTAG	CTAGTGCA
1	G10	UDI-P 79	TGTTGCAG	ACAACGTC	GACGTTGT
1	H10	UDI-P 80	CACCATGA	GTGGTACT	AGTACCAC
1	A11	UDI-P 81	TATGCGTG	ATACGCAC	GTGCGTAT
1	B11	UDI-P 82	CGCATACA	GCGTATGT	ACATACGC
1	C11	UDI-P 83	TCCTCTGA	AGGAGACT	AGTCTCCT
1	D11	UDI-P 84	CTTCTCAG	GAAGAGTC	GACTCTTC
1	E11	UDI-P 85	TCAGGCAA	AGTCCGTT	AACGGACT
1	F11	UDI-P 86	CTGAATGG	GACTTACC	GGTAAGTC
1	G11	UDI-P 87	GGTAGCTA	CCATCGAT	ATCGATGG
1	H11	UDI-P 88	AACGATCG	TTGCTAGC	GCTAGCAA
1	A12	UDI-P 89	TGTATGGC	ACATACCG	CGGTATGT
1	B12	UDI-P 90	CACGCAAT	GTGCGTTA	TAACGCAC
1	C12	UDI-P 91	GTTGCTGA	CAAGCACT	AGTGCTTG
1	D12	UDI-P 92	ACCTACAG	TGGATGTC	GACATCCA
1	E12	UDI-P 93	GACCTAAG	CTGGATT C	GAATCCAG
1	F12	UDI-P 94	AGTTCCGA	TCAAGCCT	AGGCTTGA
1	G12	UDI-P 95	GTGCTTAG	CACGAATC	GATTGCTG
1	H12	UDI-P 96	ACATCCGA	TGTAGGCT	AGCCTACA
2	A1	UDI-P 97	TGTACCTG	ACATGGAC	GTCCATGT
2	B1	UDI-P 98	CACGTTCA	GTGCAAGT	ACTTGCAC
2	C1	UDI-P 99	GGCCTTAT	CCGGAATA	TATTCCGG
2	D1	UDI-P 100	AATTCCGC	TTAAGGCG	CGCCTTAA
2	E1	UDI-P 101	TGAGTTGC	ACTCAACG	CGTTGAGT
2	F1	UDI-P 102	CAGACCAT	GTCTGGTA	TACCAGAC
2	G1	UDI-P 103	GGTCCTAA	CCAGGATT	AATCCTGG
2	H1	UDI-P 104	AACTTCGG	TTGAAGCC	GGCTTCAA
2	A2	UDI-P 105	GCTCCATA	CGAGGTAT	ATACCTCG
2	B2	UDI-P 106	ATCTTGCG	TAGAACGC	GCGTTCTA
2	C2	UDI-P 107	TGGCAGAA	ACCGTCTT	AAGACGGT
2	D2	UDI-P 108	CAATGAGG	GTTACTCC	GGAGTAAC
2	E2	UDI-P 109	GTGTGACT	CACACTGA	TCAGTGTG
2	F2	UDI-P 110	ACACAGTC	TGTGTCAG	CTGACACA
2	G2	UDI-P 111	TACACCGT	ATGTGGCA	TGCCACAT
2	H2	UDI-P 112	CGTGTTAC	GCACAATG	CATTGTGC
2	A3	UDI-P 113	GTGATCCT	CACTAGGA	TCCTAGTG
2	B3	UDI-P 114	ACAGCTTC	TGTGGAAG	CTTCGACA
2	C3	UDI-P 115	GATGAGCT	CTACTCGA	TCGAGTAG
2	D3	UDI-P 116	AGCAGATC	TCGTCTAG	CTAGACGA
2	E3	UDI-P 117	TGGTATGC	ACCATACG	CGTATGGT
2	F3	UDI-P 118	CAACGCAT	GTTGCGTA	TACGCAAC
2	G3	UDI-P 119	TCAAGGCA	AGTTCGGT	ACGGA ACT

2	H3	UDI-P 120	CTGGAATG	GACCTTAC	GTAAGGTC
2	A4	UDI-P 121	TGATGCCT	ACTACGGA	TCCGTAGT
2	B4	UDI-P 122	CAGCATTG	GTCGTAAG	CTTACGAC
2	C4	UDI-P 123	GAGAAGCTG	CTCTTGAC	GTCAAGAG
2	D4	UDI-P 124	AGAGGTCA	TCTCCAGT	ACTGGAGA
2	E4	UDI-P 125	GCTTCTCA	CGAAGAGT	ACTCTTCG
2	F4	UDI-P 126	ATCCTCTG	TAGGAGAC	GTCTCCTA
2	G4	UDI-P 127	GGCATGAA	CCGTAATT	AAGTACGG
2	H4	UDI-P 128	AATGCAGG	TTACGTCC	GGACGTAA
2	A5	UDI-P 129	GCTCTTAC	CGAGAATG	CATTCTCG
2	B5	UDI-P 130	ATCTCCGT	TAGAGGCA	TGCCTCTA
2	C5	UDI-P 131	TGGTCTCA	ACCAGAGT	ACTCTGGT
2	D5	UDI-P 132	CAACTCTG	GTTGAGAC	GTCTCAAC
2	E5	UDI-P 133	TGACAGTG	ACTGTCAC	GTGACAGT
2	F5	UDI-P 134	CAGTGACA	GTCAGTGT	ACAGTGAC
2	G5	UDI-P 135	GTTGTCAC	CAACAGTG	CACTGTTG
2	H5	UDI-P 136	ACCACTGT	TGGTGACA	TGTCACCA
2	A6	UDI-P 137	GACTCACT	CTGAGTGA	TCACTCAG
2	B6	UDI-P 138	AGTCTGTC	TCAGACAG	CTGTCTGA
2	C6	UDI-P 139	GCTGGTAT	CGACCATA	TATGGTCG
2	D6	UDI-P 140	ATCAACGC	TAGTTGCG	CGCAACTA
2	E6	UDI-P 141	TATCTCGC	ATAGAGCG	CGCTCTAT
2	F6	UDI-P 142	CGCTCTAT	GCGAGATA	TATCTCGC
2	G6	UDI-P 143	GTCACACA	CAGTGTGT	ACACACTG
2	H6	UDI-P 144	ACTGTGTG	TGACACAC	GTGTGTCA
2	A7	UDI-P 145	TCACTGGG	AGTGAACC	GGTTCACT
2	B7	UDI-P 146	CTGTCCAA	GACAGGTT	AACCTGTC
2	C7	UDI-P 147	GTCTCGAA	CAGAGCTT	AAGCTCTG
2	D7	UDI-P 148	ACTCTAGG	TGAGATCC	GGATCTCA
2	E7	UDI-P 149	GTGTACGT	CACATGCA	TGCATGTG
2	F7	UDI-P 150	ACACGTAC	TGTGCATG	CATGCACA
2	G7	UDI-P 151	GAGTTAGC	CTCAATCG	CGATTGAG
2	H7	UDI-P 152	AGACCGAT	TCTGGCTA	TAGCCAGA
2	A8	UDI-P 153	TGTCCAGT	ACAGGTCA	TGACCTGT
2	B8	UDI-P 154	CACTTGAC	GTGAACTG	CAGTTCAC
2	C8	UDI-P 155	TGTTGAC	ACAAGCTG	CAGCTTGT
2	D8	UDI-P 156	CACCTAGT	GTGGATCA	TGATCCAC
2	E8	UDI-P 157	GTATGTGC	CATACACG	CGTGTATG
2	F8	UDI-P 158	ACGCACAT	TGCGTGTA	TACACGCA
2	G8	UDI-P 159	TGGAACCT	ACCTTGGA	TCCAAGGT
2	H8	UDI-P 160	CAAGGTTT	GTTCCAAG	CTTGGAAAC
2	A9	UDI-P 161	TCCGAGAA	AGGCTCTT	AAGAGCCT
2	B9	UDI-P 162	CTTAGAGG	GAATCTCC	GGAGATTG
2	C9	UDI-P 163	GTAAGTGA	CATGACCT	AGGTCATG
2	D9	UDI-P 164	ACGTCAAG	TGCAGTTC	GAAGTCA
2	E9	UDI-P 165	TGGTTCAC	ACCAAGTG	CACTTGGT
2	F9	UDI-P 166	CAACTCTG	GTTGGACA	TGTCCAAC
2	G9	UDI-P 167	TGCTGGAT	ACGACCTA	TAGGTCGT
2	H9	UDI-P 168	CATCAAGC	GTAGTTCG	CGAACTAC
2	A10	UDI-P 169	GCCAAGAT	CGGTTCTA	TAGAACCG
2	B10	UDI-P 170	ATTGGAGC	TAACCTCG	CGAGGTTA
2	C10	UDI-P 171	GTACGTTG	CATGCAAC	GTTGCATG
2	D10	UDI-P 172	ACGTACCA	TGCATGGT	ACCATGCA
2	E10	UDI-P 173	GTGGATTC	CACCTAAG	CTTAGGTG
2	F10	UDI-P 174	ACAAGCCT	TGTTCCGA	TCCGAACA
2	G10	UDI-P 175	TAGTCCG	ATCAAGGC	GCCTTGAT
2	H10	UDI-P 176	CGACCTTA	GCTGGAAT	ATTCCAGC
2	A11	UDI-P 177	TCCAATGG	AGGTTACC	GGTAACCT
2	B11	UDI-P 178	CTTGGCAA	GAACCGTT	AACGGTTC
2	C11	UDI-P 179	GTGTCAAC	CACAGTTG	CAACTGTG
2	D11	UDI-P 180	CAACTGGT	TGTGACCA	TGGTCACA
2	E11	UDI-P 181	TAGCGATC	ATCGCTAG	CTAGCGAT
2	F11	UDI-P 182	CGATAGCT	GCTATCGA	TCGATAGC

2	G11	UDI-P 183	GTGCAGTA	CACGTCAT	ATGACGTG
2	H11	UDI-P 184	ACATGACG	TGTACTGC	GCAGTACA
2	A12	UDI-P 185	TCGAAGTG	AGCTTCAC	GTGAAGCT
2	B12	UDI-P 186	CTAGGACA	GATCCTGT	ACAGGATC
2	C12	UDI-P 187	TACCACAG	ATGGTGTC	GACACCAT
2	D12	UDI-P 188	CGTTGTGA	GCAACACT	AGTGTGTC
2	E12	UDI-P 189	GCGACTAT	CGCTGATA	TATCAGCG
2	F12	UDI-P 190	ATAGTCGC	TATCAGCG	CGCTGATA
2	G12	UDI-P 191	GAGCTCAT	CTCGAGTA	TACTCGAG
2	H12	UDI-P 192	AGATCTGC	TCTAGACG	CGTCTAGA
3	A1	UDI-P 193	TGTGTCCA	ACACAGGT	ACCTGTGT
3	B1	UDI-P 194	CACACTTG	GTGTGAAC	GTTCACAC
3	C1	UDI-P 195	GTCAGAAG	CAGTCTTC	GAAGACTG
3	D1	UDI-P 196	ACTGAGGA	TGACTCCT	AGGAGTCA
3	E1	UDI-P 197	TACAGCAC	ATGTCGTG	CACGACAT
3	F1	UDI-P 198	CGTGATGT	GCACTACA	TGTAGTGC
3	G1	UDI-P 199	GTCATCTC	CAGTAGAG	CTCTACTG
3	H1	UDI-P 200	ACTGTCTT	TGACGAGA	TCTCGTCA
3	A2	UDI-P 201	TGATTGCG	ACTAACGC	GCGTTAGT
3	B2	UDI-P 202	CAGCCATA	GTCGGTAT	ATACCGAC
3	C2	UDI-P 203	GTAGCTGT	CATCGACA	TGTCGATG
3	D2	UDI-P 204	ACGATCAC	TGCTAGTG	CACTAGCA
3	E2	UDI-P 205	GCAAGTAG	CGTTCATC	GATGAACG
3	F2	UDI-P 206	ATGGACGA	TACCTGCT	AGCAGGTA
3	G2	UDI-P 207	TCGAGAGA	AGCTCTCT	AGAGAGCT
3	H2	UDI-P 208	CTAGAGAG	GATCTCTC	GAGAGATC
3	A3	UDI-P 209	GCAATAGC	CGTTATCG	CGATAACG
3	B3	UDI-P 210	ATGGCGAT	TACCGCTA	TAGCGGTA
3	C3	UDI-P 211	GAATGCGA	CTTACGCT	AGCGTAAG
3	D3	UDI-P 212	AGGCATAG	TCCGTATC	GATACGGA
3	E3	UDI-P 213	TAGCTGGA	ATCGACCT	AGGTCGAT
3	F3	UDI-P 214	CGATCAAG	GCTAGTTC	GAACTAGC
3	G3	UDI-P 215	GTCGTATG	CAGCATAC	GTATGCTG
3	H3	UDI-P 216	ACTACGCA	TGATGCGT	ACGCATCA
3	A4	UDI-P 217	TGCTAGTC	ACGATCAG	CTGATCGT
3	B4	UDI-P 218	CATCGACT	GTAGCTGA	TCAGCTAC
3	C4	UDI-P 219	TAGGCTCT	ATCCGAGA	TCTCGGAT
3	D4	UDI-P 220	CGAATCTC	GCTTAGAG	CTCTAAGC
3	E4	UDI-P 221	GGATCTCT	CCTAGAGA	TCTCTAGG
3	F4	UDI-P 222	AAGCTCTC	TTCGAGAG	CTCTCGAA
3	G4	UDI-P 223	TGTGCTGA	ACACGACT	AGTCGTGT
3	H4	UDI-P 224	CACATCAG	GTGTAGTC	GACTACAC
3	A5	UDI-P 225	TATAGCCG	ATATCGGC	GCCGATAT
3	B5	UDI-P 226	CGCGATTA	GCGCTAAT	ATTAGCGC
3	C5	UDI-P 227	TGTCCGTA	ACAGGCAT	ATGCCTGT
3	D5	UDI-P 228	CACTTACG	GTGAATGC	GCATTCAC
3	E5	UDI-P 229	GGACATTC	CCTGTAAG	CTTACAGG
3	F5	UDI-P 230	AAGTGCCT	TTCACGGA	TCCGTGAA
3	G5	UDI-P 231	TGCTTGGG	ACGAACCT	AGGTTTCG
3	H5	UDI-P 232	CATCCAAG	GTAGGTTC	GAACCTAC
3	A6	UDI-P 233	GCAGAACT	CGTCTTGA	TCAAGACG
3	B6	UDI-P 234	ATGAGGTC	TACTCCAG	CTGGAGTA
3	C6	UDI-P 235	GTTGTGCA	CAACACGT	ACGTGTTG
3	D6	UDI-P 236	ACCACATG	TGGTGTAC	GTACACCA
3	E6	UDI-P 237	TCGTAGAC	AGCATCTG	CAGATGCT
3	F6	UDI-P 238	CTACGAGT	GATGCTCA	TGAGCATC
3	G6	UDI-P 239	TGTCTGAG	ACAGACTC	GAGTCTGT
3	H6	UDI-P 240	CACTCAGA	GTGAGTCT	AGACTCAC
3	A7	UDI-P 241	TCGCTCTA	AGCGAGAT	ATCTCGCT
3	B7	UDI-P 242	CTATCTCG	GATAGAGC	GCTCTATC
3	C7	UDI-P 243	TGACTCGT	ACTGAGCA	TGCTCAGT
3	D7	UDI-P 244	CAGTCTAC	GTCAGATG	CATCTGAC
3	E7	UDI-P 245	GATTCCAG	CTAAGGTC	GACCTTAG

3	F7	UDI-P 246	AGCCTTGA	TCGGAACT	AGTTCCGA
3	G7	UDI-P 247	TCAGGTGT	AGTCCACA	TGTGGACT
3	H7	UDI-P 248	CTGAACAC	GACTTGTG	CACAAGTC
3	A8	UDI-P 249	GGCTTAGT	CCGAATCA	TGATTCGG
3	B8	UDI-P 250	AATCCGAC	TTAGGCTG	CAGCCTAA
3	C8	UDI-P 251	GGAATCCA	CCTTAGGT	ACCTAAGG
3	D8	UDI-P 252	AAGGCTTG	TTCCGAAC	GTTCCGAA
3	E8	UDI-P 253	TGGATTCTG	ACCTAAGC	GCTTAGGT
3	F8	UDI-P 254	CAAGCCTA	GTTCCGAT	ATCCGAAC
3	G8	UDI-P 255	TGCGAACA	ACGCTTGT	ACAAGCGT
3	H8	UDI-P 256	CATAGGTG	GTATCCAC	GTGGATAC
3	A9	UDI-P 257	GACTAAGG	CTGATTCC	GGAATCAG
3	B9	UDI-P 258	AGTCGGAA	TCAGCCTT	AAGGCTGA
3	C9	UDI-P 259	TGCATCAT	ACGCAGTA	TACTGCGT
3	D9	UDI-P 260	CATACTGC	GTATGACG	CGTCATAC
3	E9	UDI-P 261	TGTTGAGC	ACAACCTCG	CGAGTTGT
3	F9	UDI-P 262	CACCAGAT	GTGGTCTA	TAGACCAC
3	G9	UDI-P 263	TGGTACTG	ACCATGAC	GTCATGGT
3	H9	UDI-P 264	CAACGTCA	GTTGCAGT	ACTGCAAC
3	A10	UDI-P 265	TCGTGCAT	AGCACGTA	TACGTGCT
3	B10	UDI-P 266	CTACATGC	GATGTACG	CGTACATC
3	C10	UDI-P 267	TACGGTTG	ATGCCAAC	GTTGGCAT
3	D10	UDI-P 268	CGTAACCA	GCATTGGT	ACCAATGC
3	E10	UDI-P 269	GCGCATAA	CGCGTATT	AATACGCG
3	F10	UDI-P 270	ATATGCGG	TATACGCC	GCGGTATA
3	G10	UDI-P 271	GTAAGGAC	CATTCTCG	CAGGAATG
3	H10	UDI-P 272	ACGGAAGT	TGCCTTCA	TGAAGGCA
3	A11	UDI-P 273	GTTAGTCG	CAATCAGC	GCTGATTG
3	B11	UDI-P 274	ACCGACTA	TGGCTGAT	ATCAGCCA
3	C11	UDI-P 275	TGCTCCAA	ACGAGGTT	AACCTCGT
3	D11	UDI-P 276	CATCTTGG	GTAGAACC	GGTCTACT
3	E11	UDI-P 277	GCGATATG	CGCTATAC	GTATAGCG
3	F11	UDI-P 278	ATAGCGCA	TATCGCGT	ACGCGATA
3	G11	UDI-P 279	TCAGCAAG	AGTCGTTC	GAAGGACT
3	H11	UDI-P 280	CTGATGGA	GACTACCT	AGGTAGTC
3	A12	UDI-P 281	TGCTACGT	ACGATGCA	TGCATCGT
3	B12	UDI-P 282	CATCGTAC	GTAGCATG	CATGCTAC
3	C12	UDI-P 283	GCTTGATG	CGAACTAC	GTAGTTCG
3	D12	UDI-P 284	ATCCAGCA	TAGGTCGT	ACGACCTA
3	E12	UDI-P 285	TAACGTGC	ATTGCACG	CGTGCAAT
3	F12	UDI-P 286	CGGTACAT	GCCATGTA	TACATGGC
3	G12	UDI-P 287	TGTCGATG	ACAGCTAC	GTAGCTGT
3	H12	UDI-P 288	CACTAGCA	GTGATCGT	ACGATCAC
4	A1	UDI-P 289	GTCGATCT	CAGCTAGA	TCTAGCTG
4	B1	UDI-P 290	ACTAGCTC	TGATCGAG	CTCGATCA
4	C1	UDI-P 291	GTCTACCA	CAGATGGT	ACCATCTG
4	D1	UDI-P 292	ACTCGTTG	TGAGCAAC	GTTGCTCA
4	E1	UDI-P 293	GTACCTCA	CATGGAGT	ACTCCATG
4	F1	UDI-P 294	ACGTTCTG	TGCAAGAC	GTCTTGCA
4	G1	UDI-P 295	TAGGTGTC	ATCCACAG	CTGTGGAT
4	H1	UDI-P 296	CGAACACT	GCTTGTGA	TCACAAGC
4	A2	UDI-P 297	GGCAATTG	CCGTTAAC	GTTAACGG
4	B2	UDI-P 298	AATGGCCA	TTACCGGT	ACCGGTAA
4	C2	UDI-P 299	GTTATCGG	CAATAGCC	GGCTATTG
4	D2	UDI-P 300	ACCGCTAA	TGGCGATT	AATCGCCA
4	E2	UDI-P 301	TGCATAGG	ACGTATCC	GGATACGT
4	F2	UDI-P 302	CATGCGAA	GTACGCTT	AAGCGTAC
4	G2	UDI-P 303	TCAGGATC	AGTCCTAG	CTAGGACT
4	H2	UDI-P 304	CTGAAGCT	GACTTCGA	TCGAAGTC
4	A3	UDI-P 305	TCTGCCTA	AGACGGAT	ATCCGTCT
4	B3	UDI-P 306	CTCATTCG	GAGTAAGC	GCTTACTC
4	C3	UDI-P 307	GACACCTA	CTGTGGAT	ATCCACAG
4	D3	UDI-P 308	AGTGTTCG	TCACAAGC	GCTTGTGA

4	E3	UDI-P 309	TCTCACTG	AGAGTGAC	GCTCACTCT
4	F3	UDI-P 310	CTCTGTCA	GAGACAGT	ACTGTCTC
4	G3	UDI-P 311	GGACAAGT	CCTGTTCA	TGAACAGG
4	H3	UDI-P 312	AAGTGGAC	TTCACCTG	CAGGTGAA
4	A4	UDI-P 313	GTTAAGGC	CAATTCCG	CGGAATTG
4	B4	UDI-P 314	ACCGGAAT	TGGCCTTA	TAAGGCCA
4	C4	UDI-P 315	TAGAAGGC	ATCTTCCG	CGGAAGAT
4	D4	UDI-P 316	CGAGGAAT	GCTCCTTA	TAAGGAGC
4	E4	UDI-P 317	TACGTCGA	ATGCAGCT	AGCTGCAT
4	F4	UDI-P 318	CGTACTAG	GCATGATC	GATCATGC
4	G4	UDI-P 319	GATCTCCA	CTAGAGGT	ACCTCTAG
4	H4	UDI-P 320	AGCTCTTG	TCGAGAAC	GTTCTCGA
4	A5	UDI-P 321	TGGCTACA	ACCGATGT	ACATCGGT
4	B5	UDI-P 322	CAATCGTG	GTTAGCAC	GTGCTAAC
4	C5	UDI-P 323	TGTCACAC	ACAGTGTG	CACACTGT
4	D5	UDI-P 324	CACTGTGT	GTGACACA	TGTGTCAC
4	E5	UDI-P 325	TACGAGGT	ATGCTCCA	TGGAGCAT
4	F5	UDI-P 326	CGTAGAAC	GCATCTTG	CAAGATGC
4	G5	UDI-P 327	TCTGTAGC	AGACATCG	CGATGTCT
4	H5	UDI-P 328	CTCACGAT	GAGTGCTA	TAGCACTC
4	A6	UDI-P 329	TCGGTTGA	AGCCAACT	AGTTGGCT
4	B6	UDI-P 330	CTAACCCAG	GATTGGTC	GACCAATC
4	C6	UDI-P 331	TCTAGGAG	AGATCCTC	GAGGATCT
4	D6	UDI-P 332	CTCGAAGA	GAGCTTCT	AGAAGCTC
4	E6	UDI-P 333	GTGGTCTA	CACCAGAT	ATCTGGTG
4	F6	UDI-P 334	ACAACCTCG	TGTTGAGC	GCTCAACA
4	G6	UDI-P 335	TCTTGCGA	AGAACGCT	AGCGTTCT
4	H6	UDI-P 336	CTCCATAG	GAGGTATC	GATACCTC
4	A7	UDI-P 337	GCTTATGG	CGAATACC	GGTATTCG
4	B7	UDI-P 338	ATCCGCAA	TAGGCGTT	AACGCCTA
4	C7	UDI-P 339	TACAGGCT	ATGTCCGA	TCGGACAT
4	D7	UDI-P 340	CGTGAATC	GCACTTAG	CTAAGTGC
4	E7	UDI-P 341	TAAGGACG	ATTCCTGC	GCAGGAAT
4	F7	UDI-P 342	CGGAAGTA	GCCTTCAT	ATGAAGGC
4	G7	UDI-P 343	TGTGGAAT	ACACCTGA	TCAGGTGT
4	H7	UDI-P 344	CACAAGTC	GTGTTGAG	CTGAACAC
4	A8	UDI-P 345	TCATTGGC	AGTAACCG	CGGTTACT
4	B8	UDI-P 346	CTGCCAAT	GACGGTTA	TAACCGTC
4	C8	UDI-P 347	GATGATGC	CTACTACG	CGTAGTAG
4	D8	UDI-P 348	AGCAGCAT	TCGTCGTA	TACGACGA
4	E8	UDI-P 349	TCCAGCTA	AGGTCGAT	ATCGACCT
4	F8	UDI-P 350	CTTGATCG	GAACTAGC	GCTAGTTC
4	G8	UDI-P 351	GTTGCTAG	CAACGATC	GATCGTTG
4	H8	UDI-P 352	ACCATCGA	TGGTAGCT	AGCTACCA
4	A9	UDI-P 353	GTCTGAGA	CAGACTCT	AGAGTCTG
4	B9	UDI-P 354	ACTCAGAG	TGAGTCTC	GAGACTCA
4	C9	UDI-P 355	TCAAATGC	AGTTGACG	CGTCAACT
4	D9	UDI-P 356	CTGGTCAT	GACCAGTA	TACTGGTC
4	E9	UDI-P 357	TCAGTGCT	AGTCACGA	TCGTGACT
4	F9	UDI-P 358	CTGACATC	GAATGCTG	CTACAGTC
4	G9	UDI-P 359	TGCGGTAA	ACGCCATT	AATGGCGT
4	H9	UDI-P 360	CATAACGG	GTATTGCC	GGCAATAC
4	A10	UDI-P 361	TCGGATAG	AGCCTATC	GATAGGCT
4	B10	UDI-P 362	CTAAGCGA	GATTGCTC	AGCGAATC
4	C10	UDI-P 363	TCTGTCAG	AGACAGTC	GACTGTCT
4	D10	UDI-P 364	CTCACTGA	GAGTGACT	AGTCACTC
4	E10	UDI-P 365	GCTAGACT	CGATCTGA	TCAGATCG
4	F10	UDI-P 366	ATCGAGTC	TAGCTCAG	CTGAGCTA
4	G10	UDI-P 367	GGTACTC	CCAATGAG	CTCATTGG
4	H10	UDI-P 368	AACCGTCT	TTGGCAGA	TCTGCCAA
4	A11	UDI-P 369	TGTAGCGT	ACATCGCA	TGCGATGT
4	B11	UDI-P 370	CACGATAC	GTGCTATG	CATAGCAC
4	C11	UDI-P 371	GAGGTTAC	CTCCAATG	CATTGGAG

4	D11	UDI-P 372	AGAACCGT	TCTTGGCA	TGCCAAGA
4	E11	UDI-P 373	TGAACCAC	ACTTGGTG	CACCAAGT
4	F11	UDI-P 374	CAGGTTGT	GTCCAACA	TGTTGGAC
4	G11	UDI-P 375	TCACGGAT	AGTGCCTA	TAGGCACT
4	H11	UDI-P 376	CTGTAAGC	GACATTCG	CGAATGTC
4	A12	UDI-P 377	GTTCGATC	CAAGCTAG	CTAGCTTG
4	B12	UDI-P 378	ACCTAGCT	TGGATCGA	TCGATCCA
4	C12	UDI-P 379	TGTTGGCA	ACAACCGT	ACGTTTGT
4	D12	UDI-P 380	CACCAATG	GTGGTTAC	GTAACCAC
4	E12	UDI-P 381	TACACACG	ATGTGTGC	GCACACAT
4	F12	UDI-P 382	CGTGTGTA	GCACACAT	ATGTGTGC
4	G12	UDI-P 383	GACGGATA	CTGCCTAT	ATAGGCAG
4	H12	UDI-P 384	AGTAAGCG	TCATTCGC	GCGAATGA

Tab. 1: Sequencing indexes (barcodes) included in the KAPA UDI Primer Mix. For convenience, all 384 index sequences in a comma-separated values file (delimited text file), as well as instructions for installation of KAPA UDI Primer Mix indexes for use with Illumina Experiment Manager are available from the Technical Documents at sequencing.roche.com/support.

*The sequence of the P5 index in the orientation required when completing the sample sheet for Illumina HiSeq 2000/2500, MiSeq, and NovaSeq instruments.

**The reverse complement sequence of the P5 index in the orientation required when completing the sample sheet for Illumina iSeq, NovaSeq 6000 v1.5, MiniSeq, NextSeq, HiSeq 3000/4000, and HiSeq X instruments.

Changes to Previous Version


Updated to include usage with the KAPA HyperPETE Workflow.

Ordering Information

For a complete overview of Roche Sequencing products, including those used in sequence capture workflows, go to sequencing.roche.com/products.

Conventions

In this document, the following symbol is used to highlight important information:

Symbol	Description
	Important Note: Information critical to the success of the procedure or use of the product.

Notice to Purchaser

1. Limited Warranty

A. Products: Roche Sequencing Solutions, Inc. ("Roche") warrants that its Products conform to its published specifications and are free from defects in material or workmanship. Customer's sole and exclusive remedy (and Roche's sole and exclusive liability) under this limited warranty shall be to either (a) replace the defective Products, or (b) provide Customer with a refund, as solely determined by Roche.

B. Under no circumstances shall Roche's liability to Customer exceed the amount paid by Customer for the Services and Products to Roche. Roche will bear all reasonable shipping costs if service is re-performed at Roche or the Products are replaced. This warranty does not apply to any defect or nonconformance caused by (i) the failure by Customer to provide a suitable storage, use, or operating environment for the Materials or Customer's submission of substandard quality Materials or contaminated or degraded Materials to Roche, (ii) Customer's use of non-recommended reagents, (iii) Customer's use of the Products, Materials or Data for a purpose or in a manner other than that for which they were designed, (iv) the failure by Customer to follow Roche's published protocols, or (v) as a result of any other abuse, misuse or neglect of the Products, Materials or Data by Customer. This warranty applies only to Customer and not to third parties.

C. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ROCHE DISCLAIMS ALL OTHER REPRESENTATIONS, AND WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCTS, SERVICES AND DATA, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. CUSTOMER'S SOLE REMEDY FOR BREACH OF WARRANTY IS STATED ABOVE.

D. Any action by Customer against Roche for Roche's breach of this warranty must be commenced within 12 months following the date of such breach. Notwithstanding such 12-month period, within twenty (20) days of the delivery of Data and/or Products to Customer, Customer must notify Roche in writing of any nonconformity of the Services and Products, describing the nonconformity in detail; otherwise all Services and Products shall be conclusively deemed accepted without qualification.

2. Further Liability Limitation

To the fullest extent permitted under applicable law, Roche shall not have any liability for incidental, compensatory, punitive, consequential, indirect, special or other similar damages, however caused and regardless of form of action whether in contract, tort (including negligence), strict product liability or otherwise, even if Roche has been advised of the possibility of such damages. Customer understands that any risks of loss hereunder are reflected in the price of the services and products and that these terms would have been different if there had been a different allocation of risk.

Evidence of original purchase is required. It is important to save your sales receipt or packaging slip to verify purchase.

Restrictions and Liabilities for Roche Products

This document is provided "as is" and Roche Sequencing Solutions, Inc. ("Roche") assumes no responsibility for any typographical, technical or other inaccuracies in this document. Roche reserves the right to periodically change information that is contained in this document; however, Roche makes no commitment to provide any such changes, updates, enhancements or other additions to this document to you in a timely manner or at all.

OTHER THAN THE LIMITED WARRANTY CONTAINED IN THIS DOCUMENT, ROCHE MAKES NO REPRESENTATIONS, WARRANTIES, CONDITIONS OR COVENANTS, EITHER EXPRESS OR IMPLIED (INCLUDING WITHOUT LIMITATION, ANY EXPRESS OR IMPLIED WARRANTIES OR CONDITIONS OF FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, MERCHANTABILITY, DURABILITY, TITLE, OR RELATED TO THE PERFORMANCE OR NON-PERFORMANCE OF ANY PRODUCT REFERENCED HEREIN OR PERFORMANCE OF ANY SERVICES REFERENCED HEREIN).

This document might contain references to third party sources of information, hardware or software, products or services and/or third party web sites (collectively the "Third-Party Information"). Roche does not control, and is not responsible for, any Third-Party Information, including, without limitation the content, accuracy, copyright compliance, compatibility, performance, trustworthiness, legality, decency, links, or any other aspect of Third-Party Information. The inclusion of Third-Party Information in this document does not imply endorsement by Roche of the Third-Party Information or the third party in any way.

Roche does not in any way guarantee or represent that you will obtain satisfactory results from using Roche products as described herein. You assume all risk in connection with your use of Roche products.

Roche is not responsible nor will be liable in any way for your use of any software or equipment that is not supplied by Roche in connection with your use of Roche products.

Trademarks

KAPA is a trademark of Roche.

All other product names and trademarks are the property of their respective owners.

Patent License Limitations

For patent license limitations for individual products, go to www.technical-support.roche.com.

Regulatory Disclaimer

For Research Use Only. Not for use in diagnostic procedures.

Contact and Support

If you have questions, contact your local Roche Technical Support. Go to sequencing.roche.com/support for contact information.

© 2021 Roche Sequencing Solutions, Inc. All rights reserved.

Roche Sequencing Solutions, Inc.
4300 Hacienda Drive
Pleasanton, CA 94588 USA