Table S1: primers, adapter and barcode sequences used in this study

1 step amplification (V4 primers)

V4 FORWARD:
U515F + Unitail1 CAGGACCAGGGTACGGTGGTGCCAGCMGCCGCGGTA A

V4 MIX OF REVERSE:
802 R + unitail 2 CGCAGAGAGGCTCCGTGTACNVGGGTATCTAATCC
806r_UNI2 CGCAGAGAGGCTCCGTGGACTACHVGGGTWTCTAAT

2 step amplification (adapter and barcodes)

NAME	trP1	UNITAIL_2
ION UNI trP1	CCTCTCTATGGGCAGTCGGTGAT	CGCAGAGAGGCTCCGTG

NAME	A	key	MID(BARCODE)		UNITAIL 1
ION_UNI1_A_1	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CTAAGGTAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_2	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TAAGGAGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_3	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	AAGAGGATTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_4	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TACCAAGATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_5	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CAGAAGGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_6	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CTGCAAGTTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_7	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTCGTGATTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_8	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTCCGATAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_9	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TGAGCGGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_10	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CTGACCGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_11	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCCTCGAATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_12	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TAGGTGGTTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_13	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCTAACGGAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_14	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTGGAGTGTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_15	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCTAGAGGTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_16	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCTGGATGAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_17	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCTATTCGTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_18	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	AGGCAATTGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_19	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTAGTCGGAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_20	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CAGATCCATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_21	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCGCAATTAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_22	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTCGAGACGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_23	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TGCCACGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_24	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	AACCTCATTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_25	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CCTGAGATAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_26	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTACAACCTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_27	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	AACCATCCGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_28	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	ATCCGGAATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_29	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCGACCACTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_30	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CGAGGTTATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_31	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCCAAGCTGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_32	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCTTACACAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_33	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTCTCATTGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_34	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCGCATCGTTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_35	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TAAGCCATTGTC	GAT	CAGGACCAGGGTACGGTG

ION_UNI1_A_36	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	AAGGAATCGTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_37	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CTTGAGAATGTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_38	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TGGAGGACGGAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_39	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TAACAATCGGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_40	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CTGACATAATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_41	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTCCACTTCGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_42	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	AGCACGAATC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_43	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CTTGACACCGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_44	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTGGAGGCCAGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_45	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TGGAGCTTCCTC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_46	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCAGTCCGAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_47	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TAAGGCAACCAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_48	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTCTAAGAGAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_49	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TCCTAACATAAC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_50	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	CGGACAATGGC	GAT	CAGGACCAGGGTACGGTG
ION_UNI1_A_51	CCATCTCATCCCTGCGTGTCTCCGAC	TCAG	TTGAGCCTATTC	GAT	CAGGACCAGGGTACGGTG