

Table S1. Sequences and modifications of the oligonucleotides used in this work.

Oligonucleotide Name	Oligonucleotide Sequence and Modification
TypeA/B base PCR	/5Acrd/AAGCAGTGGTATCAACGCAGAGTACGA CGCTCTT
Bridge_A	AGATCGG AAGAGCG
Bridge_C	GACTTGT CTAGAGC
Readout_Alexa647	/Alexa647/GAGGGCGTTCAATCACTC
Readout_Alexa488	/Alexa488/GGAATAACGAAGCACCCA
Readout_Alexa555	/Alexa555/CTGTGTAGAGGGCGAGAC
Readout_Alexa750	/Alexa750/GGTGTGTGTGCTTCAAAC
Readout_R0	TGATGTTGACCTGCCGAG
Readout_G0	GAACCCAGGACATTCAG
Readout_P0	AGCATTTACGGGATCACG
Readout_B0	GATTGGGAATGTCGCCA
Branch_00_NNNN	CTGGAATGTCCTGGTTC CTCGCAGGTACAACATCA TGGCAGACATTCCTCAATC CGTGATCCCGTAAATGCT GTCTAATAGTTAGGCGCTAT
Branch_01_NNNR	CTGGAATGTCCTGGTTC GAGTGATTGAACGCCCTC TGGCAGACATTCCTCAATC CGTGATCCCGTAAATGCT TTCTGAGGACATACCTCGAC
Branch_02_NNPN	CTGGAATGTCCTGGTTC CTCGCAGGTACAACATCA TGGCAGACATTCCTCAATC GTCTCGCCCTCTACACAG AGCATAACGGCGTTCGGTATC
Branch_03_NNPR	CTGGAATGTCCTGGTTC GAGTGATTGAACGCCCTC TGGCAGACATTCCTCAATC GTCTCGCCCTCTACACAG TAGCTGCTGTAGGTAACFT
Branch_04_NGNN	TGGGTGCTTCGTTATTCC CTCGCAGGTACAACATCA TGGCAGACATTCCTCAATC CGTGATCCCGTAAATGCT AAGCGTATATTCGCTCGAC
Branch_05_NGNR	TGGGTGCTTCGTTATTCC GAGTGATTGAACGCCCTC TGGCAGACATTCCTCAATC CGTGATCCCGTAAATGCT AATCTCGCGTTGAATCGCT
Branch_06_NGPN	TGGGTGCTTCGTTATTCC CTCGCAGGTACAACATCA TGGCAGACATTCCTCAATC GTCTCGCCCTCTACACAG GCCTTACCGTATAGGCTGFT
Branch_07_NGPR	TGGGTGCTTCGTTATTCC GAGTGATTGAACGCCCTC TGGCAGACATTCCTCAATC GTCTCGCCCTCTACACAG CCGCAATCCGTTGGTAATA
Branch_08_BNNN	CTGGAATGTCCTGGTTC CTCGCAGGTACAACATCA GTTTGAAGCACACACACC CGTGATCCCGTAAATGCT TCCGAGACCATAGAGTCTCA
Branch_09_BNNR	CTGGAATGTCCTGGTTC GAGTGATTGAACGCCCTC GTTTGAAGCACACACACC CGTGATCCCGTAAATGCT GAGAGGATTTGCTCTCAGG
Branch_10_BNPN	CTGGAATGTCCTGGTTC CTCGCAGGTACAACATCA GTTTGAAGCACACACACC GTCTCGCCCTCTACACAG AAGGCCATCATTTAGCCAGFT
Branch_11_BNPR	CTGGAATGTCCTGGTTC GAGTGATTGAACGCCCTC GTTTGAAGCACACACACC GTCTCGCCCTCTACACAG AGCTGCCCTAAGGCATTCAT
Branch_12_BGNN	TGGGTGCTTCGTTATTCC CTCGCAGGTACAACATCA GTTTGAAGCACACACACC CGTGATCCCGTAAATGCT TCAATATCGACGAGTTGCGC
Branch_13_BGNR	TGGGTGCTTCGTTATTCC GAGTGATTGAACGCCCTC GTTTGAAGCACACACACC CGTGATCCCGTAAATGCT TTATGACCAACCGGTCCTAA
Branch_14_BGPN	TGGGTGCTTCGTTATTCC CTCGCAGGTACAACATCA GTTTGAAGCACACACACC GTCTCGCCCTCTACACAG GTAGGAACCAATCCAACATC
Branch_15_BGPR	TGGGTGCTTCGTTATTCC GAGTGATTGAACGCCCTC GTTTGAAGCACACACACC GTCTCGCCCTCTACACAG GTTCTCTCTTCGGGAGGAA
Stem_CC00_ID01	CCGATCT ATAGGCCTCACCTATTAGAC CATCOGTA GCTCTAG
Stem_CC00_ID02	CCGATCT ATAGGCCTCACCTATTAGAC GTCTAGT GCTCTAG
Stem_CC00_ID03	CCGATCT ATAGGCCTCACCTATTAGAC CGGAAGAA GCTCTAG
Stem_CC00_ID04	CCGATCT ATAGGCCTCACCTATTAGAC GCCAAGAA GCTCTAG
Stem_CC00_ID05	CCGATCT ATAGGCCTCACCTATTAGAC GGAGAGAA GCTCTAG
Stem_CC00_ID06	CCGATCT ATAGGCCTCACCTATTAGAC ACGGAGAA GCTCTAG
Stem_CC00_ID07	CCGATCT ATAGGCCTCACCTATTAGAC CACGAGAA GCTCTAG
Stem_CC00_ID08	CCGATCT ATAGGCCTCACCTATTAGAC CCACAGAA GCTCTAG
Stem_CC00_ID09	CCGATCT ATAGGCCTCACCTATTAGAC GAGCAGAA GCTCTAG
Stem_CC00_ID10	CCGATCT ATAGGCCTCACCTATTAGAC AGCCAGAA GCTCTAG
Stem_CC00_ID11	CCGATCT ATAGGCCTCACCTATTAGAC TCGAGGAA GCTCTAG
Stem_CC00_ID12	CCGATCT ATAGGCCTCACCTATTAGAC CTCAGGAA GCTCTAG
Stem_CC00_ID13	CCGATCT ATAGGCCTCACCTATTAGAC GGTAGGAA GCTCTAG
Stem_CC00_ID14	CCGATCT ATAGGCCTCACCTATTAGAC TGACGGAA GCTCTAG
Stem_CC00_ID15	CCGATCT ATAGGCCTCACCTATTAGAC ATGCGGAA GCTCTAG
Stem_CC00_ID16	CCGATCT ATAGGCCTCACCTATTAGAC GCATGGAA GCTCTAG
Stem_CC00_ID17	CCGATCT ATAGGCCTCACCTATTAGAC CAGTGGAA GCTCTAG
Stem_CC00_ID21	CCGATCT ATAGGCCTCACCTATTAGAC TCACGGAA GCTCTAG
Stem_CC00_ID22	CCGATCT ATAGGCCTCACCTATTAGAC ATCGOGAA GCTCTAG
Stem_CC00_ID24	CCGATCT ATAGGCCTCACCTATTAGAC CGATCGAA GCTCTAG
Stem_CC01_ID01	CCGATCT GTCGAGGTATGTCCTCAGAA CATCCGTA GCTCTAG
Stem_CC01_ID02	CCGATCT GTCGAGGTATGTCCTCAGAA GTCTAGT GCTCTAG
Stem_CC01_ID03	CCGATCT GTCGAGGTATGTCCTCAGAA CGGAAGAA GCTCTAG
Stem_CC01_ID04	CCGATCT GTCGAGGTATGTCCTCAGAA GCCAAGAA GCTCTAG
Stem_CC01_ID06	CCGATCT GTCGAGGTATGTCCTCAGAA ACGGAGAA GCTCTAG
Stem_CC01_ID08	CCGATCT GTCGAGGTATGTCCTCAGAA CCACAGAA GCTCTAG
Stem_CC01_ID09	CCGATCT GTCGAGGTATGTCCTCAGAA GAGCAGAA GCTCTAG
Stem_CC01_ID10	CCGATCT GTCGAGGTATGTCCTCAGAA AGCCAGAA GCTCTAG
Stem_CC01_ID11	CCGATCT GTCGAGGTATGTCCTCAGAA TCGAGGAA GCTCTAG
Stem_CC01_ID12	CCGATCT GTCGAGGTATGTCCTCAGAA CTCAGGAA GCTCTAG
Stem_CC01_ID13	CCGATCT GTCGAGGTATGTCCTCAGAA GGTAGGAA GCTCTAG
Stem_CC01_ID14	CCGATCT GTCGAGGTATGTCCTCAGAA TGACGGAA GCTCTAG
Stem_CC01_ID15	CCGATCT GTCGAGGTATGTCCTCAGAA ATGCGGAA GCTCTAG
Stem_CC01_ID16	CCGATCT GTCGAGGTATGTCCTCAGAA GCATGGAA GCTCTAG
Stem_CC01_ID17	CCGATCT GTCGAGGTATGTCCTCAGAA CAGTGGAA GCTCTAG
Stem_CC01_ID21	CCGATCT GTCGAGGTATGTCCTCAGAA TCACGGAA GCTCTAG
Stem_CC01_ID22	CCGATCT GTCGAGGTATGTCCTCAGAA ATCGOGAA GCTCTAG
Stem_CC01_ID23	CCGATCT GTCGAGGTATGTCCTCAGAA GATCGGAA GCTCTAG
Stem_CC01_ID24	CCGATCT GTCGAGGTATGTCCTCAGAA CGATCGAA GCTCTAG
Stem_CC01_ID25	CCGATCT GTCGAGGTATGTCCTCAGAA CTGGTAA GCTCTAG
Stem_CC02_ID02	CCGATCT GATACGGAAACGCCGTATGCT GTCTAGT GCTCTAG
Stem_CC02_ID03	CCGATCT GATACGGAAACGCCGTATGCT CGGAAGAA GCTCTAG
Stem_CC02_ID05	CCGATCT GATACGGAAACGCCGTATGCT GGAGAGAA GCTCTAG
Stem_CC02_ID06	CCGATCT GATACGGAAACGCCGTATGCT ACGGAGAA GCTCTAG
Stem_CC02_ID07	CCGATCT GATACGGAAACGCCGTATGCT CACGAGAA GCTCTAG
Stem_CC02_ID08	CCGATCT GATACGGAAACGCCGTATGCT CCACAGAA GCTCTAG
Stem_CC02_ID09	CCGATCT GATACGGAAACGCCGTATGCT GAGCAGAA GCTCTAG
Stem_CC02_ID10	CCGATCT GATACGGAAACGCCGTATGCT AGCCAGAA GCTCTAG
Stem_CC02_ID12	CCGATCT GATACGGAAACGCCGTATGCT CTCAGGAA GCTCTAG
Stem_CC02_ID14	CCGATCT GATACGGAAACGCCGTATGCT TGACGGAA GCTCTAG
Stem_CC02_ID15	CCGATCT GATACGGAAACGCCGTATGCT ATGCGGAA GCTCTAG
Stem_CC02_ID16	CCGATCT GATACGGAAACGCCGTATGCT GCATGGAA GCTCTAG
Stem_CC02_ID17	CCGATCT GATACGGAAACGCCGTATGCT CAGTGGAA GCTCTAG
Stem_CC02_ID22	CCGATCT GATACGGAAACGCCGTATGCT ATCGOGAA GCTCTAG
Stem_CC02_ID24	CCGATCT GATACGGAAACGCCGTATGCT CGATCGAA GCTCTAG
Stem_CC02_ID25	CCGATCT GATACGGAAACGCCGTATGCT CTGGTAA GCTCTAG
Stem_CC02_ID26	CCGATCT GATACGGAAACGCCGTATGCT GTCCGAA GCTCTAG
Stem_CC02_ID32	CCGATCT GATACGGAAACGCCGTATGCT CTCACAA GCTCTAG
Stem_CC02_ID33	CCGATCT GATACGGAAACGCCGTATGCT GGCACAA GCTCTAG
Stem_CC02_ID35	CCGATCT GATACGGAAACGCCGTATGCT GAGAGCAA GCTCTAG
Stem_CC03_ID02	CCGATCT AAGTTACCTAGCAGCAGCTA GTCTAGT GCTCTAG
Stem_CC03_ID03	CCGATCT AAGTTACCTAGCAGCAGCTA CGGAAGAA GCTCTAG
Stem_CC03_ID04	CCGATCT AAGTTACCTAGCAGCAGCTA GCCAAGAA GCTCTAG
Stem_CC03_ID05	CCGATCT AAGTTACCTAGCAGCAGCTA GGAGAGAA GCTCTAG
Stem_CC03_ID06	CCGATCT AAGTTACCTAGCAGCAGCTA ACGGAGAA GCTCTAG
Stem_CC03_ID08	CCGATCT AAGTTACCTAGCAGCAGCTA CCACAGAA GCTCTAG
Stem_CC03_ID10	CCGATCT AAGTTACCTAGCAGCAGCTA AGCCAGAA GCTCTAG
Stem_CC03_ID12	CCGATCT AAGTTACCTAGCAGCAGCTA CTCAGGAA GCTCTAG
Stem_CC03_ID13	CCGATCT AAGTTACCTAGCAGCAGCTA GGTAGGAA GCTCTAG
Stem_CC03_ID14	CCGATCT AAGTTACCTAGCAGCAGCTA TGACGGAA GCTCTAG

Stem_CC08_ID12	CCGATCT	TGAGACTCTATGGTCTCGGA	CTCAGGAA	GCTCTAG
Stem_CC08_ID13	CCGATCT	TGAGACTCTATGGTCTCGGA	GGTAGGAA	GCTCTAG
Stem_CC08_ID14	CCGATCT	TGAGACTCTATGGTCTCGGA	TGACGGAA	GCTCTAG
Stem_CC08_ID15	CCGATCT	TGAGACTCTATGGTCTCGGA	ATGCGGAA	GCTCTAG
Stem_CC08_ID16	CCGATCT	TGAGACTCTATGGTCTCGGA	GCATGGAA	GCTCTAG
Stem_CC08_ID17	CCGATCT	TGAGACTCTATGGTCTCGGA	CAGTGGAA	GCTCTAG
Stem_CC08_ID25	CCGATCT	TGAGACTCTATGGTCTCGGA	CTGGTAA	GCTCTAG
Stem_CC08_ID26	CCGATCT	TGAGACTCTATGGTCTCGGA	GTCCGTAA	GCTCTAG
Stem_CC08_ID29	CCGATCT	TGAGACTCTATGGTCTCGGA	TGCACAAA	GCTCTAG
Stem_CC08_ID30	CCGATCT	TGAGACTCTATGGTCTCGGA	CCTGACAA	GCTCTAG
Stem_CC08_ID31	CCGATCT	TGAGACTCTATGGTCTCGGA	TGCACAAA	GCTCTAG
Stem_CC09_ID00	CCGATCT	CCTGAGAGCAAATTCCTCTC	TGGCATGA	GCTCTAG
Stem_CC09_ID01	CCGATCT	CCTGAGAGCAAATTCCTCTC	CATCCGTA	GCTCTAG
Stem_CC09_ID03	CCGATCT	CCTGAGAGCAAATTCCTCTC	CGGAAGAA	GCTCTAG
Stem_CC09_ID05	CCGATCT	CCTGAGAGCAAATTCCTCTC	GGAGAGAA	GCTCTAG
Stem_CC09_ID06	CCGATCT	CCTGAGAGCAAATTCCTCTC	ACGGAGAA	GCTCTAG
Stem_CC09_ID08	CCGATCT	CCTGAGAGCAAATTCCTCTC	CCACAGAA	GCTCTAG
Stem_CC09_ID10	CCGATCT	CCTGAGAGCAAATTCCTCTC	AGCCAGAA	GCTCTAG
Stem_CC09_ID11	CCGATCT	CCTGAGAGCAAATTCCTCTC	TCGAGGAA	GCTCTAG
Stem_CC09_ID12	CCGATCT	CCTGAGAGCAAATTCCTCTC	CTCAGGAA	GCTCTAG
Stem_CC09_ID13	CCGATCT	CCTGAGAGCAAATTCCTCTC	GGTAGGAA	GCTCTAG
Stem_CC09_ID14	CCGATCT	CCTGAGAGCAAATTCCTCTC	TGACGGAA	GCTCTAG
Stem_CC09_ID15	CCGATCT	CCTGAGAGCAAATTCCTCTC	ATGCGGAA	GCTCTAG
Stem_CC09_ID16	CCGATCT	CCTGAGAGCAAATTCCTCTC	GCATGGAA	GCTCTAG
Stem_CC09_ID17	CCGATCT	CCTGAGAGCAAATTCCTCTC	CAGTGGAA	GCTCTAG
Stem_CC09_ID22	CCGATCT	CCTGAGAGCAAATTCCTCTC	ATCGGGAA	GCTCTAG
Stem_CC09_ID24	CCGATCT	CCTGAGAGCAAATTCCTCTC	CGATCGAA	GCTCTAG
Stem_CC09_ID26	CCGATCT	CCTGAGAGCAAATTCCTCTC	GTCCGTAA	GCTCTAG
Stem_CC09_ID27	CCGATCT	CCTGAGAGCAAATTCCTCTC	CGTCTGAA	GCTCTAG
Stem_CC09_ID28	CCGATCT	CCTGAGAGCAAATTCCTCTC	GTGGACAA	GCTCTAG
Stem_CC09_ID29	CCGATCT	CCTGAGAGCAAATTCCTCTC	TGCGACAA	GCTCTAG
Stem_CC10_ID00	CCGATCT	ACCTGGCCAATGATGGCCCT	TGGCATGA	GCTCTAG
Stem_CC10_ID01	CCGATCT	ACCTGGCCAATGATGGCCCT	CATCCGTA	GCTCTAG
Stem_CC10_ID02	CCGATCT	ACCTGGCCAATGATGGCCCT	GTCTAGTG	GCTCTAG
Stem_CC10_ID03	CCGATCT	ACCTGGCCAATGATGGCCCT	CGGAAGAA	GCTCTAG
Stem_CC10_ID05	CCGATCT	ACCTGGCCAATGATGGCCCT	GGAGAGAA	GCTCTAG
Stem_CC10_ID07	CCGATCT	ACCTGGCCAATGATGGCCCT	CACGAGAA	GCTCTAG
Stem_CC10_ID08	CCGATCT	ACCTGGCCAATGATGGCCCT	CCACAGAA	GCTCTAG
Stem_CC10_ID09	CCGATCT	ACCTGGCCAATGATGGCCCT	GAGCAGAA	GCTCTAG
Stem_CC10_ID10	CCGATCT	ACCTGGCCAATGATGGCCCT	AGCCAGAA	GCTCTAG
Stem_CC10_ID12	CCGATCT	ACCTGGCCAATGATGGCCCT	CTCAGGAA	GCTCTAG
Stem_CC10_ID13	CCGATCT	ACCTGGCCAATGATGGCCCT	GGTAGGAA	GCTCTAG
Stem_CC10_ID14	CCGATCT	ACCTGGCCAATGATGGCCCT	TGACGGAA	GCTCTAG
Stem_CC10_ID15	CCGATCT	ACCTGGCCAATGATGGCCCT	ATGCGGAA	GCTCTAG
Stem_CC10_ID16	CCGATCT	ACCTGGCCAATGATGGCCCT	GCATGGAA	GCTCTAG
Stem_CC10_ID17	CCGATCT	ACCTGGCCAATGATGGCCCT	CAGTGGAA	GCTCTAG
Stem_CC10_ID21	CCGATCT	ACCTGGCCAATGATGGCCCT	TCACGAGAA	GCTCTAG
Stem_CC10_ID22	CCGATCT	ACCTGGCCAATGATGGCCCT	ATCGCGAA	GCTCTAG
Stem_CC10_ID24	CCGATCT	ACCTGGCCAATGATGGCCCT	CGATCGAA	GCTCTAG
Stem_CC10_ID25	CCGATCT	ACCTGGCCAATGATGGCCCT	CTGGTAA	GCTCTAG
Stem_CC10_ID26	CCGATCT	ACCTGGCCAATGATGGCCCT	GTCCGTAA	GCTCTAG
Stem_CC11_ID00	CCGATCT	ATGAATGCCTTGAGGCAGCT	TGGCATGA	GCTCTAG
Stem_CC11_ID01	CCGATCT	ATGAATGCCTTGAGGCAGCT	CATCCGTA	GCTCTAG
Stem_CC11_ID02	CCGATCT	ATGAATGCCTTGAGGCAGCT	GTCTAGTG	GCTCTAG
Stem_CC11_ID03	CCGATCT	ATGAATGCCTTGAGGCAGCT	CGGAAGAA	GCTCTAG
Stem_CC11_ID05	CCGATCT	ATGAATGCCTTGAGGCAGCT	GGAGAGAA	GCTCTAG
Stem_CC11_ID06	CCGATCT	ATGAATGCCTTGAGGCAGCT	ACGGAGAA	GCTCTAG
Stem_CC11_ID07	CCGATCT	ATGAATGCCTTGAGGCAGCT	CACGAGAA	GCTCTAG
Stem_CC11_ID08	CCGATCT	ATGAATGCCTTGAGGCAGCT	CCACAGAA	GCTCTAG
Stem_CC11_ID09	CCGATCT	ATGAATGCCTTGAGGCAGCT	GAGCAGAA	GCTCTAG
Stem_CC11_ID10	CCGATCT	ATGAATGCCTTGAGGCAGCT	AGCCAGAA	GCTCTAG
Stem_CC11_ID11	CCGATCT	ATGAATGCCTTGAGGCAGCT	TCGAGGAA	GCTCTAG
Stem_CC11_ID12	CCGATCT	ATGAATGCCTTGAGGCAGCT	CTCAGGAA	GCTCTAG
Stem_CC11_ID14	CCGATCT	ATGAATGCCTTGAGGCAGCT	TGACGGAA	GCTCTAG
Stem_CC11_ID15	CCGATCT	ATGAATGCCTTGAGGCAGCT	ATGCGGAA	GCTCTAG
Stem_CC11_ID16	CCGATCT	ATGAATGCCTTGAGGCAGCT	GCATGGAA	GCTCTAG
Stem_CC11_ID17	CCGATCT	ATGAATGCCTTGAGGCAGCT	CAGTGGAA	GCTCTAG
Stem_CC11_ID19	CCGATCT	ATGAATGCCTTGAGGCAGCT	TGCACGAA	GCTCTAG
Stem_CC11_ID21	CCGATCT	ATGAATGCCTTGAGGCAGCT	TCACGAGAA	GCTCTAG
Stem_CC11_ID22	CCGATCT	ATGAATGCCTTGAGGCAGCT	ATCGCGAA	GCTCTAG
Stem_CC11_ID24	CCGATCT	ATGAATGCCTTGAGGCAGCT	CGATCGAA	GCTCTAG
Stem_CC12_ID01	CCGATCT	GGCGAACTCGTCGATATTGA	CATCCGTA	GCTCTAG
Stem_CC12_ID02	CCGATCT	GGCGAACTCGTCGATATTGA	GTCTAGTG	GCTCTAG
Stem_CC12_ID03	CCGATCT	GGCGAACTCGTCGATATTGA	CGGAAGAA	GCTCTAG
Stem_CC12_ID04	CCGATCT	GGCGAACTCGTCGATATTGA	GCCAAGAA	GCTCTAG
Stem_CC12_ID07	CCGATCT	GGCGAACTCGTCGATATTGA	CACGAGAA	GCTCTAG
Stem_CC12_ID08	CCGATCT	GGCGAACTCGTCGATATTGA	CCACAGAA	GCTCTAG
Stem_CC12_ID09	CCGATCT	GGCGAACTCGTCGATATTGA	GAGCAGAA	GCTCTAG
Stem_CC12_ID10	CCGATCT	GGCGAACTCGTCGATATTGA	AGCCAGAA	GCTCTAG
Stem_CC12_ID12	CCGATCT	GGCGAACTCGTCGATATTGA	CTCAGGAA	GCTCTAG
Stem_CC12_ID14	CCGATCT	GGCGAACTCGTCGATATTGA	TGACGGAA	GCTCTAG
Stem_CC12_ID15	CCGATCT	GGCGAACTCGTCGATATTGA	ATGCGGAA	GCTCTAG
Stem_CC12_ID16	CCGATCT	GGCGAACTCGTCGATATTGA	GCATGGAA	GCTCTAG
Stem_CC12_ID17	CCGATCT	GGCGAACTCGTCGATATTGA	CAGTGGAA	GCTCTAG
Stem_CC12_ID21	CCGATCT	GGCGAACTCGTCGATATTGA	TCAGCGAA	GCTCTAG
Stem_CC12_ID23	CCGATCT	GGCGAACTCGTCGATATTGA	GATGCGAA	GCTCTAG
Stem_CC12_ID25	CCGATCT	GGCGAACTCGTCGATATTGA	CTGGTAA	GCTCTAG
Stem_CC12_ID26	CCGATCT	GGCGAACTCGTCGATATTGA	GTCCGTAA	GCTCTAG
Stem_CC12_ID27	CCGATCT	GGCGAACTCGTCGATATTGA	CGTCTGAA	GCTCTAG
Stem_CC12_ID29	CCGATCT	GGCGAACTCGTCGATATTGA	TGCACAAA	GCTCTAG
Stem_CC12_ID30	CCGATCT	GGCGAACTCGTCGATATTGA	CCTGACAA	GCTCTAG
Stem_CC13_ID01	CCGATCT	TTAGGACCGGTTGGTCATAA	CATCCGTA	GCTCTAG
Stem_CC13_ID02	CCGATCT	TTAGGACCGGTTGGTCATAA	GTCTAGTG	GCTCTAG
Stem_CC13_ID03	CCGATCT	TTAGGACCGGTTGGTCATAA	CGGAAGAA	GCTCTAG
Stem_CC13_ID04	CCGATCT	TTAGGACCGGTTGGTCATAA	GCCAAGAA	GCTCTAG
Stem_CC13_ID06	CCGATCT	TTAGGACCGGTTGGTCATAA	ACGGAGAA	GCTCTAG
Stem_CC13_ID07	CCGATCT	TTAGGACCGGTTGGTCATAA	CACGAGAA	GCTCTAG
Stem_CC13_ID08	CCGATCT	TTAGGACCGGTTGGTCATAA	CCACAGAA	GCTCTAG
Stem_CC13_ID09	CCGATCT	TTAGGACCGGTTGGTCATAA	GAGCAGAA	GCTCTAG

Table S2. Primer and oligonucleotides sequences used in this work.

barcoded oligo-dT primers & TSO

barcode	sequence
ATCTGTGA	AGACGTGTGCTCTTCCGATCTATCCTGTABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
ATTGAGGA	AGACGTGTGCTCTTCCGATCTATTGAGGABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CAACCACA	AGACGTGTGCTCTTCCGATCTCAACCACABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
GACTAGTA	AGACGTGTGCTCTTCCGATCTGACTAGTABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CAATGGAA	AGACGTGTGCTCTTCCGATCTCAATGGAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CACTTCGA	AGACGTGTGCTCTTCCGATCTCACTTCGABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CAGCGTTA	AGACGTGTGCTCTTCCGATCTCAGCGTABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CATACCAA	AGACGTGTGCTCTTCCGATCTCATACCAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CCAGTTCA	AGACGTGTGCTCTTCCGATCTCCAGTTABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CCGAAGTA	AGACGTGTGCTCTTCCGATCTCCGAAGTABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CCGTGAGA	AGACGTGTGCTCTTCCGATCTCCGTGAGABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CCTCTGA	AGACGTGTGCTCTTCCGATCTCCTCTGABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CGAACTTA	AGACGTGTGCTCTTCCGATCTCGAACTTABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CGACTGGA	AGACGTGTGCTCTTCCGATCTCGACTGABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CGCATACA	AGACGTGTGCTCTTCCGATCTCGCATACABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
CTCAATGA	AGACGTGTGCTCTTCCGATCTCTCAATGABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
biotinylated template switching oligonucleotide (TSO)	BiO-AAGCAGTGGTATCAACGCAGATCrfGrG+

SeqAmp PCR primers

name	sequence
primer2	AAGCAGTGGTATCAACGCAGAT
additive primer	AGACGTGTGCTCTTCCGATCT

Indexing primers (TruSeq P5)

name	sequence
501	AATGATACGGCGACCACCGAGATCTACACTAGATCGCACACTCTTTCCCTACACGACGCTCTTCCGATCT
502	AATGATACGGCGACCACCGAGATCTACACTCTCTATACACTCTTTCCCTACACGACGCTCTTCCGATCT
503	AATGATACGGCGACCACCGAGATCTACACTATCCTCTACACTCTTTCCCTACACGACGCTCTTCCGATCT
504	AATGATACGGCGACCACCGAGATCTACACAGTAGAAGACTCTTTCCCTACACGACGCTCTTCCGATCT
505	AATGATACGGCGACCACCGAGATCTACACGTAAGGAGACACTCTTTCCCTACACGACGCTCTTCCGATCT
506	AATGATACGGCGACCACCGAGATCTACACACTGCATAACACTCTTTCCCTACACGACGCTCTTCCGATCT
507	AATGATACGGCGACCACCGAGATCTACACAAGGAGTAACTCTTTCCCTACACGACGCTCTTCCGATCT
508	AATGATACGGCGACCACCGAGATCTACACCTAAGCTTACACTCTTTCCCTACACGACGCTCTTCCGATCT

Indexing primers (TruSeq DNA Methylation P7)

name	sequence
TruSeq_DNA_Methy_index1	CAAGCAGAAGACGGCATACGAGATATCACGGTACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index2	CAAGCAGAAGACGGCATACGAGATCGATGTGTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index3	CAAGCAGAAGACGGCATACGAGATTAGGCGTACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index4	CAAGCAGAAGACGGCATACGAGATTGACCACTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index5	CAAGCAGAAGACGGCATACGAGATACAGTGTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index6	CAAGCAGAAGACGGCATACGAGATGCCAATGTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index7	CAAGCAGAAGACGGCATACGAGATCAGATCGTACTGGAGTTCAGACGTGTGCTCTTCCGATCT
TruSeq_DNA_Methy_index8	CAAGCAGAAGACGGCATACGAGATACTTGGTACTGGAGTTCAGACGTGTGCTCTTCCGATCT