

Supplementary Table S1.
Barcode-extended primers for targeted NGS used.

Experiment	Primers	Sequences
SIMON	BarcodeA_ETT-exon6_top-F3	ACGTTGTGTTTTTTTTTAGGTAGTAAAAATG
	BarcodeA_ETT-exon6_top-R3	ACGTTTCCTAATATTTATTAATAAATAACAAACTTCT
	BarcodeA_ETT-exon9-F	ACGTTATTAGTTTGGTTTGAGAGGTTTTTATAAG
	BarcodeA_ETT-exon9-R	ACGTATCTATAACACAAATCCCCTCTACAATAATAAC
	BarcodeA_ETT-exon10_top-F	ACGTTTTYTGATATTATTGYAGAGGGGATT
	BarcodeA_ETT-exon10_top-R	ACGTAAACCAAACARCCTRCATCT
	BarcodeA_API-promoter-F	ACGTGAAGGTGAYAYTTGGGGAAGGA
	BarcodeA_API_promoter-R	ACGTATCTTRTCTCTATCCTCTTCAATT
	BarcodeA_PHB-exon14-F	ACGTGGTAATATGTTAAAAAGTTATTTAAGGATTAG
	BarcodeA_PHB-exon14-R	ACGTACTCCATAAATCATATAAACAAAAACAAAAACC
	BarcodeA_ARF4-exon10-F	ACGTGGTTTTTTGGACTTTGAGGA
	BarcodeA_ARF4-exon10-R	ACGTACCTTCATTTTGTGCATCAAAC
	BarcodeA_BP-exon4-F	ACGTTTAGTTTAATTATAAAGGTAGATGATTAG
	BarcodeA_BP-exon4-R	ACGTTAATATATATTTTAAAAAATATAAAAAACA
	BarcodeB_ETT-exon6_top-F3	ACTGTGTGTTTTTTTTTAGGTAGTAAAAATG
	BarcodeB_ETT-exon6_top-R3	ACTGTTCCATAATATTTATTAATAAATAACAAACTTCT
	BarcodeB_ETT-exon9-F	ACTGTATTAGTTTGGTTTGAGAGGTTTTTATAAG
	BarcodeB_ETT-exon9-R	ACTGATCTATAACACAAATCCCCTCTACAATAATAAC
	BarcodeB_ETT-exon10_top-F	ACTGTTTTYTGATATTATTGYAGAGGGGATT
	BarcodeB_ETT-exon10_top-R	ACTGAAACCAAACARCCTRCATCT
	BarcodeB_API-promoter-F	ACTGGAAGGTGAYAYTTGGGGAAGGA
	BarcodeB_API_promoter-R	ACTGATCTTRTCTCTATCCTCTTCAATT
	BarcodeB_PHB-exon14-F	ACTGGGTAATATGTTAAAAAGTTATTTAAGGATTAG
	BarcodeB_PHB-exon14-R	ACTGACTCCATAAATCATATAAACAAAAACAAAAACC
	BarcodeB_ARF4-exon10-F	ACTGGGTTTTTTGGACTTTGAGGA
	BarcodeB_ARF4-exon10-R	ACTGACCTTCATTTTGTGCATCAAAC
	BarcodeB_BP-exon4-F	ACTGTTAGTTTAATTATAAAGGTAGATGATTAG
	BarcodeB_BP-exon4-R	ACTGTAATATATATTTTAAAAAATATAAAAAACA
	BarcodeC_ETT-exon6_top-F3	AGCTTGTGTTTTTTTTTAGGTAGTAAAAATG
	BarcodeC_ETT-exon6_top-R3	AGCTTTCCTAATATTTATTAATAAATAACAAACTTCT
	BarcodeC_ETT-exon9-F	AGCTTATTAGTTTGGTTTGAGAGGTTTTTATAAG
	BarcodeC_ETT-exon9-R	AGCTATCTATAACACAAATCCCCTCTACAATAATAAC
	BarcodeC_ETT-exon10_top-F	AGCTTTTTYTGATATTATTGYAGAGGGGATT
	BarcodeC_ETT-exon10_top-R	AGCTAAACCAAACARCCTRCATCT
	BarcodeC_API-promoter-F	AGCTGAAGGTGAYAYTTGGGGAAGGA
	BarcodeC_API_promoter-R	AGCTATCTTRTCTCTATCCTCTTCAATT
	BarcodeC_PHB-exon14-F	AGCTGGTAATATGTTAAAAAGTTATTTAAGGATTAG
	BarcodeC_PHB-exon14-R	AGCTACTCCATAAATCATATAAACAAAAACAAAAACC
	BarcodeC_ARF4-exon10-F	AGCTGGTTTTTTGGACTTTGAGGA
	BarcodeC_ARF4-exon10-R	AGCTACCTTCATTTTGTGCATCAAAC
	BarcodeC_BP-exon4-F	AGCTTAGTTTAATTATAAAGGTAGATGATTAG
	BarcodeC_BP-exon4-R	AGCTAATATATATTTTAAAAAATATAAAAAACA
	BarcodeD_ETT-exon6_top-F3	AGTCTGTGTTTTTTTTTAGGTAGTAAAAATG
	BarcodeD_ETT-exon6_top-R3	AGTCTTCCTAATATTTATTAATAAATAACAAACTTCT
	BarcodeD_ETT-exon9-F	AGTCTATTAGTTTGGTTTGAGAGGTTTTTATAAG
	BarcodeD_ETT-exon9-R	AGTCATCTATAACACAAATCCCCTCTACAATAATAAC
	BarcodeD_ETT-exon10_top-F	AGCTTTTTYTGATATTATTGYAGAGGGGATT
	BarcodeD_ETT-exon10_top-R	AGTCAAACCAAACARCCTRCATCT
	BarcodeD_API-promoter-F	AGTCGAAGGTGAYAYTTGGGGAAGGA
	BarcodeD_API_promoter-R	AGTCATCTTRTCTCTATCCTCTTCAATT
	BarcodeD_PHB-exon14-F	AGTCGGTAATATGTTAAAAAGTTATTTAAGGATTAG
	BarcodeD_PHB-exon14-R	AGTCACTCCATAAATCATATAAACAAAAACAAAAACC
	BarcodeD_ARF4-exon10-F	AGTCGGTTTTTTGGACTTTGAGGA
	BarcodeD_ARF4-exon10-R	AGTCACCTTCATTTTGTGCATCAAAC
	BarcodeD_BP-exon4-F	AGTCTTAGTTTAATTATAAAGGTAGATGATTAG
	BarcodeD_BP-exon4-R	AGTCTAATATATATTTTAAAAAATATAAAAAACA
	BarcodeE_ETT-exon6_top-F3	ATCGTGTGTTTTTTTTTAGGTAGTAAAAATG

BarcodeE	ETT-exon6_top-R3	ATCGTTCCTAATATTTATTAATAAATAACAAACTTCT
BarcodeE	ETT-exon9-F	ATCGTATTAGTTTGGTTTGAGAGGTTTTTTATAAG
BarcodeE	ETT-exon9-R	ATCGATCTATAACACAAATCCCCTCTACAATAATAAC
BarcodeE	ETT-exon10_top-F	ATCGTTTTYGYTATTATTGYAGAGGGGATT
BarcodeE	ETT-exon10_top-R	ATCGAAACCAAACARCCTRCATCT
BarcodeE	AP1-promoter-F	ATCGGAAGGTGAYAYTTGGGGAAGGA
BarcodeE	AP1-promoter-R	ATCGATCTTRTCTCTATCCTCTTCAATT
BarcodeE	PHB-exon14-F	ATCGGGTAATATGTTAAAAAGTTATTTAAGGATTAG
BarcodeE	PHB-exon14-R	ATCGACTCCATAAATCATATAAACAAAAACAAAAACC
BarcodeE	ARF4-exon10-F	ATCGGGTTTTTTGGACTTTGAGGA
BarcodeE	ARF4-exon10-R	ATCGACCTTCATTTTGTGCATCAAACCT
BarcodeE	BP-exon4-F	ATCGTTAGTTTAATTATAAAGGTAGATGATTAG
BarcodeE	BP-exon4-R	ATCGTAATATATATTTTAAAAAATATAAAAAACA
BarcodeF	ETT-exon6_top-F3	ATGCTGTGTTTTTTTTTAGGTAGTTAAAAATG
BarcodeF	ETT-exon6_top-R3	ATGCTTCCTAATATTTATTAATAAATAACAAACTTCT
BarcodeF	ETT-exon9-F	ATGCTATTAGTTTGGTTTGAGAGGTTTTTTATAAG
BarcodeF	ETT-exon9-R	ATGCATCTATAACACAAATCCCCTCTACAATAATAAC
BarcodeF	ETT-exon10_top-F	ATGCTTTYTYGYTATTATTGYAGAGGGGATT
BarcodeF	ETT-exon10_top-R	ATGCAAACCAAACARCCTRCATCT
BarcodeF	AP1-promoter-F	ATGCGAAGGTGAYAYTTGGGGAAGGA
BarcodeF	AP1-promoter-R	ATGCATCTTRTCTCTATCCTCTTCAATT
BarcodeF	PHB-exon14-F	ATGCGGTAATATGTTAAAAAGTTATTTAAGGATTAG
BarcodeF	PHB-exon14-R	ATGCACTCCATAAATCATATAAACAAAAACAAAAACC
BarcodeF	ARF4-exon10-F	ATGCGGTTTTTTGGACTTTGAGGA
BarcodeF	ARF4-exon10-R	ATGCACCTTCATTTTGTGCATCAAACCT
BarcodeF	BP-exon4-F	ATGCTTAGTTTAATTATAAAGGTAGATGATTAG
BarcodeF	BP-exon4-R	ATGCTAATATATATTTTAAAAAATATAAAAAACA
BarcodeG	ETT-exon6_top-F3	CAGTTGTGTTTTTTTTTAGGTAGTTAAAAATG
BarcodeG	ETT-exon6_top-R3	CAGTTTCCTAATATTTATTAATAAATAACAAACTTCT
BarcodeG	ETT-exon9-F	CAGTTATTAGTTTGGTTTGAGAGGTTTTTTATAAG
BarcodeG	ETT-exon9-R	CAGTATCTATAACACAAATCCCCTCTACAATAATAAC
BarcodeG	ETT-exon10_top-F	CAGTTTTYTYGYTATTATTGYAGAGGGGATT
BarcodeG	ETT-exon10_top-R	CAGTAAACCAAACARCCTRCATCT
BarcodeG	AP1-promoter-F	CAGTGAAGGTGAYAYTTGGGGAAGGA
BarcodeG	AP1-promoter-R	CAGTATCTTRTCTCTATCCTCTTCAATT
BarcodeG	PHB-exon14-F	CAGTGGTAATATGTTAAAAAGTTATTTAAGGATTAG
BarcodeG	PHB-exon14-R	CAGTACTCCATAAATCATATAAACAAAAACAAAAACC
BarcodeG	ARF4-exon10-F	CAGTGGTTTTTTGGACTTTGAGGA
BarcodeG	ARF4-exon10-R	CAGTACCTTCATTTTGTGCATCAAACCT
BarcodeG	BP-exon4-F	CAGTTTAGTTTAATTATAAAGGTAGATGATTAG
BarcodeG	BP-exon4-R	CAGTTAATATATATTTTAAAAAATATAAAAAACA
BarcodeH	ETT-exon6_top-F3	CATGTGTGTTTTTTTTTAGGTAGTTAAAAATG
BarcodeH	ETT-exon6_top-R3	CATGTTTCCTAATATTTATTAATAAATAACAAACTTCT
BarcodeH	ETT-exon9-F	CATGTATTAGTTTGGTTTGAGAGGTTTTTTATAAG
BarcodeH	ETT-exon9-R	CATGATCTATAACACAAATCCCCTCTACAATAATAAC
BarcodeH	ETT-exon10_top-F	CATGTTTTYTYGYTATTATTGYAGAGGGGATT
BarcodeH	ETT-exon10_top-R	CATGAAACCAAACARCCTRCATCT
BarcodeH	AP1-promoter-F	CATGGAAGGTGAYAYTTGGGGAAGGA
BarcodeH	AP1-promoter-R	CATGATCTTRTCTCTATCCTCTTCAATT
BarcodeH	PHB-exon14-F	CATGGGTAATATGTTAAAAAGTTATTTAAGGATTAG
BarcodeH	PHB-exon14-R	CATGACTCCATAAATCATATAAACAAAAACAAAAACC
BarcodeH	ARF4-exon10-F	CATGGGTTTTTTGGACTTTGAGGA
BarcodeH	ARF4-exon10-R	CATGACCTTCATTTTGTGCATCAAACCT
BarcodeH	BP-exon4-F	CATGTTAGTTTAATTATAAAGGTAGATGATTAG
BarcodeH	BP-exon4-R	CATGTAATATATATTTTAAAAAATATAAAAAACA

Twenty-four kinds of barcode sequences of 4 different nucleotides.

Sample	Barcode sequences
Sample A	ACGT
Sample B	ACTG
Sample C	AGCT
Sample D	AGTC
Sample E	ATCG
Sample F	ATGC
Sample G	CAGT
Sample H	CATG
Sample I	CGAT
Sample J	CGTA
Sample K	CTAG
Sample L	CTGA
Sample M	GACT
Sample N	GATC
Sample O	GCAT
Sample P	GCTA
Sample Q	GTAC
Sample R	GTCA
Sample S	TACG
Sample T	TAGC
Sample U	TCAG
Sample V	TCGA
Sample W	TGAC
Sample X	TGCA