

**Supplementary Table 1. List of primers and barcodes.**

Oligonucleotide	Vendor	Cat #	Sequence
RT Chain Specific Outer Primer mix			
RT-mIGK	IDT	271038654	TTGTCGTTCACTGCCATCAAT*C
RT-mIGHG	IDT	271038655	AGCTGGGAAGGTGTGCACA*C
RT-mIGL	IDT	271038656	GGGGTACCATCTACCTTCCA*C
RT-mIGHG3-NEW	IDT	271038657	GTACAGATGAGACTGTGCGCACA*C
TSO-short	IDT	408473058	/5Biosg/AAGCAGTGGTATCAACGCAGAGTACA TrGrGrG
PCR Chain Specific Reverse Inner Primer Mix			
10for-mIgh3	IDT	270929982	GGATAGACAGATGGGGCTGTTGTTGTAG*C
PCR-R-mIGL	IDT	270929983	ATCGTACACACCAGTGTGG*C
6-REV-LC	IDT	270929984	GGATACAGTTGGTGCAGCAT*C
10-REV-HC1	IDT	270929985	ATAGACAGATGGGGGTGTCGTTTTGG*C

F Primer, ISPCR (Barcoded) PCR-SMART indices	Sequence
01-SMARTindex	CAGCGTCAGTGGTATCAACGCAGAGTACA
02-SMARTindex	GATCACCAGTGGTATCAACGCAGAGTACA
03-SMARTindex	ACCAGTCAGTGGTATCAACGCAGAGTACA
04-SMARTindex	TGCACGCAGTGGTATCAACGCAGAGTACA
05-SMARTindex	ACATTACAGTGGTATCAACGCAGAGTACA
06-SMARTindex	GTGTAGCAGTGGTATCAACGCAGAGTACA
07-SMARTindex	CTAGTCCAGTGGTATCAACGCAGAGTACA
08-SMARTindex	TGTGCACAGTGGTATCAACGCAGAGTACA
09-SMARTindex	TCAGGAACAGTGGTATCAACGCAGAGTACA
10-SMARTindex	CGGTAAACAGTGGTATCAACGCAGAGTACA
11-SMARTindex	TTAACTACAGTGGTATCAACGCAGAGTACA
12-SMARTindex	ATGAACACAGTGGTATCAACGCAGAGTACA
13-SMARTindex	CCTAAGACAGTGGTATCAACGCAGAGTACA
14-SMARTindex	AATCCGACAGTGGTATCAACGCAGAGTACA
15-SMARTindex	GGCTGCACAGTGGTATCAACGCAGAGTACA
16-SMARTindex	TACCTTACAGTGGTATCAACGCAGAGTACA
17-SMARTindex	TCTTAATCAGTGGTATCAACGCAGAGTACA
18-SMARTindex	GTCAGGTCAGTGGTATCAACGCAGAGTACA
19-SMARTindex	ATACTGTCAGTGGTATCAACGCAGAGTACA
20-SMARTindex	TATGTCTCAGTGGTATCAACGCAGAGTACA
21-SMARTindex	GAGTCCTCAGTGGTATCAACGCAGAGTACA
22-SMARTindex	GGAGGTTCAAGTGGTATCAACGCAGAGTACA
23-SMARTindex	CACACTTCAGTGGTATCAACGCAGAGTACA
24-SMARTindex	CCGCAATCAGTGGTATCAACGCAGAGTACA
25-SMARTindex	TTTATGCAGTGGTATCAACGCAGAGTACA
26-SMARTindex	AACGCCACAGTGGTATCAACGCAGAGTACA
27-SMARTindex	CAAGCACAGTGGTATCAACGCAGAGTACA
28-SMARTindex	GCTCGACAGTGGTATCAACGCAGAGTACA
29-SMARTindex	GCGAATCAGTGGTATCAACGCAGAGTACA
30-SMARTindex	TGGATTCAAGTGGTATCAACGCAGAGTACA
31-SMARTindex	ACCTACCAGTGGTATCAACGCAGAGTACA
32-SMARTindex	CGAAGGCAGTGGTATCAACGCAGAGTACA
33-SMARTindex	AGATAGAACAGTGGTATCAACGCAGAGTACA
34-SMARTindex	TTGGTAAACAGTGGTATCAACGCAGAGTACA

35-SMARTindex	GTTACCAACAGTGGTATCAACGCAGAGTACA
36-SMARTindex	CGCAACAACAGTGGTATCAACGCAGAGTACA
37-SMARTindex	TGGCGAAACAGTGGTATCAACGCAGAGTACA
38-SMARTindex	ACCGTGAACAGTGGTATCAACGCAGAGTACA
39-SMARTindex	CAACAGAACAGTGGTATCAACGCAGAGTACA
40-SMARTindex	GATTGTAACAGTGGTATCAACGCAGAGTACA
41-SMARTindex	CTCTCGATCAGTGGTATCAACGCAGAGTACA
42-SMARTindex	TGACACATCAGTGGTATCAACGCAGAGTACA
43-SMARTindex	AAGACAATCAGTGGTATCAACGCAGAGTACA
44-SMARTindex	ACAGATATCAGTGGTATCAACGCAGAGTACA
45-SMARTindex	TAGGCTATCAGTGGTATCAACGCAGAGTACA
46-SMARTindex	CTCCATATCAGTGGTATCAACGCAGAGTACA
47-SMARTindex	GCATGGATCAGTGGTATCAACGCAGAGTACA
48-SMARTindex	AATAGCATCAGTGGTATCAACGCAGAGTACA
49-SMARTindex	GTGCCATACAGTGGTATCAACGCAGAGTACA
50-SMARTindex	TCGAGGTACAGTGGTATCAACGCAGAGTACA
51-SMARTindex	CACTAATACAGTGGTATCAACGCAGAGTACA
52-SMARTindex	GGTATATACAGTGGTATCAACGCAGAGTACA
53-SMARTindex	CGCCTGTACAGTGGTATCAACGCAGAGTACA
54-SMARTindex	AATGAATACAGTGGTATCAACGCAGAGTACA
55-SMARTindex	ACAACGTACAGTGGTATCAACGCAGAGTACA
56-SMARTindex	ATATCCTACAGTGGTATCAACGCAGAGTACA
57-SMARTindex	AGTACTCAGTGGTATCAACGCAGAGTACA
58-SMARTindex	ATAAGACAGTGGTATCAACGCAGAGTACA
59-SMARTindex	GGTGAGCAGTGGTATCAACGCAGAGTACA
60-SMARTindex	TTCCGCCAGTGGTATCAACGCAGAGTACA
61-SMARTindex	GAAGTGCAGTGGTATCAACGCAGAGTACA
62-SMARTindex	CAATGCCAGTGGTATCAACGCAGAGTACA
63-SMARTindex	ACGTCTCAGTGGTATCAACGCAGAGTACA
64-SMARTindex	CAGGACCAGTGGTATCAACGCAGAGTACA
65-SMARTindex	AAGCTCCAGTGGTATCAACGCAGAGTACA
66-SMARTindex	GACGATCAGTGGTATCAACGCAGAGTACA
67-SMARTindex	TCGTTCCAGTGGTATCAACGCAGAGTACA
68-SMARTindex	CCAATTCAGTGGTATCAACGCAGAGTACA
69-SMARTindex	AGTTGACAGTGGTATCAACGCAGAGTACA
70-SMARTindex	AACCGACAGTGGTATCAACGCAGAGTACA
71-SMARTindex	CAGATGCAGTGGTATCAACGCAGAGTACA
72-SMARTindex	GTAGAACAGTGGTATCAACGCAGAGTACA
73-SMARTindex	GACATCACAGTGGTATCAACGCAGAGTACA
74-SMARTindex	CGATCTACAGTGGTATCAACGCAGAGTACA
75-SMARTindex	CGTCGCACAGTGGTATCAACGCAGAGTACA
76-SMARTindex	ATGGCGACAGTGGTATCAACGCAGAGTACA
77-SMARTindex	ATTGGTACAGTGGTATCAACGCAGAGTACA
78-SMARTindex	GCCACAACAGTGGTATCAACGCAGAGTACA
79-SMARTindex	CATCTAACAGTGGTATCAACGCAGAGTACA
80-SMARTindex	AACAAGACAGTGGTATCAACGCAGAGTACA
81-SMARTindex	GCAGCCTCAGTGGTATCAACGCAGAGTACA
82-SMARTindex	ACTCTTTCAGTGGTATCAACGCAGAGTACA
83-SMARTindex	TGCTATTCAGTGGTATCAACGCAGAGTACA
84-SMARTindex	AAGTGGTCAGTGGTATCAACGCAGAGTACA
85-SMARTindex	CTCATATCAGTGGTATCAACGCAGAGTACA
86-SMARTindex	CCGACCTCAGTGGTATCAACGCAGAGTACA
87-SMARTindex	GGCCAATCAGTGGTATCAACGCAGAGTACA

88-SMARTindex	AGACCATCAGTGGTATCAACGCAGAGTACA
89-SMARTindex	CGCGGACAGTGGTATCAACGCAGAGTACA
90-SMARTindex	CCTGCTCAGTGGTATCAACGCAGAGTACA
91-SMARTindex	GCGCTGCAGTGGTATCAACGCAGAGTACA
92-SMARTindex	GAACCTCAGTGGTATCAACGCAGAGTACA
93-SMARTindex	TTCGAGCAGTGGTATCAACGCAGAGTACA
94-SMARTindex	AGAATCCAGTGGTATCAACGCAGAGTACA
95-SMARTindex	AGGCATCAGTGGTATCAACGCAGAGTACA
96-SMARTindex	ACACGCCAGTGGTATCAACGCAGAGTACA

**Supplementary Table 1.** Top table. Sequences of oligonucleotides used for priming cDNA synthesis and for amplification of V<sub>L</sub> and V<sub>H</sub> domains. Bottom table. Sequences of oligonucleotides used to barcode samples.