

Supplemental table 1: Clone Accession Number Designation, Sample Source, CDR3 Region Analysis and Clone Size

GenBank Accession number	Case ID	Sample Source	Calcific Aortic Stenosis Valve Type	TRBV	CDR3 length (IMGT)	CDR3 Sequence, Analysis and Translation *	TRBD	TRBJ	Number of Sequences Comprising Clone†	For clones shared between sites	
										Percentage TRBV family accounted for by clone determined by sequencing	Percentage of entire repertoire in sample occupied by clone
JF731129	T54	Valve Leaflet	Tricuspid Valve	7-6*01	12	TGTGCCAGCAGCTTAGataccCGCGGGGATACGCAGTATTTT C A S S L D T R G D T Q Y F	2*01	2-3*01	4	8.9	0.804
JF731130	T54	Circulating CD8+CD28neg T cells	Tricuspid Valve	7-6*01	12	TGTGCCAGCAGCTTAGataccCGCGGGGATACGCAGTATTTT C A S S L D T R G D T Q Y F	2*01	2-3*01	38	97.4	2.47
JF731131	T54	Valve Leaflet	Tricuspid Valve	12-3*01	13	TGTGCCAGCAGTagaACTAGCGGGGtCTACAATGAGCAGTTCTTC C A S S R T S G V Y N E Q F F	2*01	2-1*01	11	55	1.39
JF731132	T54	Circulating CD8+CD28neg T cells	Tricuspid Valve	12-3*01	13	TGTGCCAGCAGTagaACTAGCGGGGtCTACAATGAGCAGTTCTTC C A S S R T S G V Y N E Q F F	2*01	2-1*01	22	55	3.06
JF731133	T55	Valve Leaflet	Tricuspid Valve	11-2*03	12	TGTGCCAGCAGCTTAGctttGGctttCAATGAGCAGTTCTTC C A S S L A L A F N E Q F F	1*01	2-1*01	18	85.7	10.94
JF731134	T55	Circulating CD8+CD28neg T cells	Tricuspid Valve	11-2*03	12	TGTGCCAGCAGCTTAGctttGGctttCAATGAGCAGTTCTTC C A S S L A L A F N E Q F F	1*01	2-1*01	3	17.7	1.51
JF731135	T55	Circulating CD8+CD28+ T cells	Tricuspid Valve	11-2*03	12	TGTGCCAGCAGCTTAGctttGGctttCAATGAGCAGTTCTTC C A S S L A L A F N E Q F F	1*01	2-1*01	4	20	1.97
JF731136	T54	Valve Leaflet	Tricuspid Valve	7-6*01	10	TGTGCCAGCAGCCAGGctccggggaAAGCTTCTTT C A S S Q A P G K A F F	1*01	1-1*01	8	18.6	1.68

JF731137	T54	Circulating CD8+CD28+ T cells	Tricuspid Valve	7-6*01	10	TGTGCCAGCAGCCAGGctccggggaAAGCTTCTTT C A S S Q A P G K A F F	1*01	1-1*01	4	9.3	0.53
JF731138	T55	Valve Leaflet	Tricuspid Valve	11-2*01	17	TGTGCCAGCAGCTTAaatGACAGGGGagtaggacttagCTCCTACGAGCAGTACTTC C A S S L N D R G V G L S S Y E Q Y F	1*01	2-7*01	2	9.5	1.21
JF731139	T55	Circulating CD8+CD28+ T cells	Tricuspid Valve	11-2*01	17	TGTGCCAGCAGCTTAaatGACAGGGGagtaggacttagCTCCTACGAGCAGTACTTC C A S S L N D R G V G L S S Y E Q Y F	1*01	2-7*01	11	55	5.41
JF731140	T54	Valve Leaflet	Tricuspid Valve	7-9*01	15	TGCGCCAGCAGCTcaaacGACTAGCGGGAGagtCCGGGAGCTGTTTTTT C A S S S K R L A G E S G E L F F	2*02	2-2*01	1	2.2	0.19
JF731141	T54	Circulating CD4+ T cells	Tricuspid Valve	7-9*01	15	TGTGCCAGCAGCTcaaacGACTAGCGGGAGagtCCGGGAGCTGTTTTTT C A S S S K R L A G E S G E L F F	2*02	2-2*01	1	2.6	0.12
JF731142	B14	Valve Leaflet	Bicuspid Valve	5-6*01	11	TGTGCCAGCAGaaatGACAGtaAAGAGACCCAGTACTTC C A S R N D S K E T Q Y F	1*01	2-5*01	5		
JF731143	B14	Valve Leaflet	Bicuspid Valve	5-5*01	11	TGTGCCAGCAGCgggatgAGCGGAGAGACCCAGTACTTC C A S S G M S G E T Q Y F	2*01	2-5*01	6		
JF731144	B14	Valve Leaflet	Bicuspid Valve	5-1*01	11	TGCGCCAGCAGCTTGcGCGGGGGGACGAGCAGTACTTC C A S S L R G G D E Q Y F	2*01	2-7*01	3		
JF731145	B14	Valve Leaflet	Bicuspid Valve	5-6*01	11	TGTGCCAGCAGCcggGACAaTACAATGAGCAGTTCTTC C A S S R G Q Y N E Q F F	1*01	2-1*01	1		
JF731146	B14	Valve Leaflet	Bicuspid Valve	5-4*01	12	TGTGCCAGCAGCTTGgagaCGAACACCGGGAGCTGTTTTTT C A S S L E T N T G E L F F	none	2-2*01	3		
JF731147	B14	Valve Leaflet	Bicuspid Valve	5-1*01	13	TGCGCCAGCAGCatGCGGcagattgaaaACAATGAGCAGTTCTTC C A S S M R Q I E N N E Q F F	2*01	2-1*01	1		
JF731148	B14	Valve Leaflet	Bicuspid Valve	5-1*01	13	TGCGCCAGCAGCTcgGCGGGaCGAACACCGGGAGCTGTTTTTT C A S S S A G T N T G E L F F	2*01	2-2*01	1		

JF731149	B14	Valve Leaflet	Bicuspid Valve	5-1*01	14	TGCGCCAGCAttaatggttGGGGGttccgcgcctTACGAGCAGTACTTC C A S I N V G G S A P Y E Q Y F	2*01	2-7*01	1
JF731150	B14	Valve Leaflet	Bicuspid Valve	5-6*01	14	TGTGCCAGCAGCTTGGggctgGGGACcggatCCTACGAGCAGTACTTC C A S S L G L G T G S Y E Q Y F	2*01	2-7*01	4
JF731151	B14	Valve Leaflet	Bicuspid Valve	5-6*01	14	TGTGCCAGCAGCTTGatcgAGCGGGAGGGggCCGGGGAGCTGTTTTTTT C A S S L I E R E G A G E L F F	2*02	2-2*01	2
JF731152	B14	Valve Leaflet	Bicuspid Valve	5-4*01	14	TGTGCCAGCAGCTTattatccGGGACTAGCACAGATACGCAGTATTTT C A S S L L S G T S T D T Q Y F	2*01	2-3*01	1
JF731153	B14	Valve Leaflet	Bicuspid Valve	5-1*01	14	TGCGCCAGCAGCagtACTAGCGGGAGccGCACAGATACGCAGTATTTT C A S S S T S G S R T D T Q Y F	2*02	2-3*01	5
JF731154	B14	Valve Leaflet	Bicuspid Valve	5-1*01	15	TGCGCCAGCAGCgtgccagAGGGtaggacggttagCCTACGAGCAGTACTTC C A S S V P E G R T V A Y E Q Y F	2*02	2-7*01	2
JF731155	B14	Valve Leaflet	Bicuspid Valve	5-1*01	18	TGCGCCAGCcaatcctccgggacaggGGGACTAGCGGGAGtttatgggGAGCAGTACTTC C A S Q S S G T G G L A G V Y G E Q Y F	2*02	2-7*01	1
JF731156	T10	Valve Leaflet	Tricuspid Valve	5-1*01	10	TGTGCCAGCAGCacggccgGCCGGCAGCAGTACTTC C A S S T A G G E Q Y F	2*01	2-7*01	2
JF731157	T10	Valve Leaflet	Tricuspid Valve	5-1*01	11	TGCGCCAGCAGCTTGGtgtACAGCTATGGCTACACCTTC C A S S L V Y S Y G Y T F	1*01	1-2*01	3
JF731158	T10	Valve Leaflet	Tricuspid Valve	5-n	12	TGTGCCAGCAGCTTGaaatttacGAACACTGAAGCTTTCTTT C A S S L K F T N T E A F F	none	1-1*01	2
JF731159	T10	Valve Leaflet	Tricuspid Valve	5-1*01	12	TGCGCCAGCAGCTactcgatCGGGGGAGATACGCAGTATTTT C A S S Y S I G G D T Q Y F	2*01	2-3*01	5
JF731160	T10	Valve Leaflet	Tricuspid Valve	5-1*01	13	TGCGCCAGCAGCTTGGCGGGAGcaccCAAGAGACCCAGTACTTC C A S S L A G A P Q E T Q Y F	2*02	2-5*01	2

JF731161	T10	Valve Leaflet	Tricuspid Valve	5-1*01	13	TGCGCCAGCAGCTTGGatcCAGGGGGCctcaGGGAGCTGTTTTTT C A S S L D P G G L R E L F F	1*01	2-2*01	4
JF731162	T10	Valve Leaflet	Tricuspid Valve	5-1*01	13	TGCGCCAGCAGCTtcccggggAGCGGGctCTACGAGCAGTACTTC C A S S S P G S G L Y E Q Y F	2*01	2-7*01	13
JF731163	T10	Valve Leaflet	Tricuspid Valve	5-n	14	TGTGCCAGCAGCTTGGGCGGctcgacgAGCACAGATACGCAGTATTTT C A S S L G G S T S T D T Q Y F	2*01	2-3*01	2
JF731164	T10	Valve Leaflet	Tricuspid Valve	5-5*01	15	TGTGCCAGCAGCTTagagGGGAGtggaataccctcgagccgGCAGTTCTTC C A S S L E G S G I P S S R Q F F	2*02	2-1*01	5
JF731165	T57	Valve Leaflet	Tricuspid Valve	7-3*03	10	CGTGCCAGCAGCTTGGAtggCAATGAGCAGTTCTTC R A S S L D G N E Q F F	2*01	2-1*01	6
JF731166	T57	Valve Leaflet	Tricuspid Valve	7-2*01	10	TGTGCCAGCAGCaccCaGGGACtTGGCTACACCTTC C A S S T Q G L G Y T F	1*01	1-2*01	12
JF731167	T57	Valve Leaflet	Tricuspid Valve	7-2*01	11	TGTGCCAGCAGCTTAGaCGGGccgataggGCTGTTTTTTT C A S S L D G P I G L F F	2*01	2-2*01	8
JF731168	T57	Valve Leaflet	Tricuspid Valve	7-2*01	11	TGTGCCAGCAGCTTAGGGGtcagcactGAGCAGTTCTTC C A S S L G V S T E Q F F	2*01	2-1*01	2
JF731169	T57	Valve Leaflet	Tricuspid Valve	7-2*01	13	TGTGCCAGCAGCTTcgacGGGACAGtCACAGATACGCAGTATTTT C A S S F D G T V T D T Q Y F	1*01	2-3*01	5
JF731170	T54	Valve Leaflet	Tricuspid Valve	7-9*01	10	TGTGCCAGCAGCTTAGGAGGGagcaAGCAGTACTTC C A S S L G G S K Q Y F	2*02	2-7*01	6
JF731171	T54	Valve Leaflet	Tricuspid Valve	7-9*01	11	TGTGCCAGCAGCTTAACAGGGaggACTGAAGCTTTCTTT C A S S L T G R T E A F F	1*01	1-1*01	1
JF731172	T54	Valve Leaflet	Tricuspid Valve	7-9*01	11	TGTGCCAGCAGCcccatcccgtACAacGAGCAGTTCTTC C A S S P I P Y N E Q F F	1*01	2-1*01	5
JF731173	T54	Valve Leaflet	Tricuspid	7-9*01	11	TGTGCCAGCtcccaacCGGGAaCCTACGAGCAGTACTTC	2*02	2-7*01	4

Accession	Species	Gene	Region	Position	Sequence	Start	End	Count	
		Valve			C A S S Q P G T Y E Q Y F				
JF731174	T54	Valve Leaflet	Tricuspid Valve	7-9*01	11	TGTGCCAGCAGCTcccAGCcccaCTACGAGCAGTACTTC C A S S S Q P H Y E Q Y F	2*01	2-7*01	1
JF731175	T54	Valve Leaflet	Tricuspid Valve	7-8*01	13	TGTGCCAGCAGCccGGGACTAGCGataaCCTACGAGCAGTACTTC C A S S P G L A I T Y E Q Y F	2*01	2-7*01	6
JF731176	T54	Valve Leaflet	Tricuspid Valve	7-6*01	13	TGTGCCAGCAGCACAGGGctctcgGGGGCCAACGTCCTGACTTTTC C A S S T G L S G A N V L T F	1*01	2-6*01	2
JF731177	T54	Valve Leaflet	Tricuspid Valve	7-9*01	14	TGTGCCAGCAGCTTAGtgggtctggGGGACAACACTGAAGCTTTCCTTT C A S S L V G L G D N T E A F F	1*01	1-1*01	2
JF731178	T54	Valve Leaflet	Tricuspid Valve	12-3*01	10	TGTGCCAGCAcccacCGGGCAGATACGCAGTATTTT C A S T H R A D T Q Y F	2*01	2-3*01	5
JF731179	T54	Valve Leaflet	Tricuspid Valve	12-3*01	11	TGTGCCAGCgcatcGGGACTAGgcGAGACCCAGTACTTC C A S A S G L G E T Q Y F	2*01	2-5*01	6
JF731180	T54	Valve Leaflet	Tricuspid Valve	12-3*01	11	TGTGCCAGCAGTTTtaACAGGGGacATGGCTACACCTTC C A S S F N R G H G Y T F	1*01	1-2*01	2
JF731181	T54	Valve Leaflet	Tricuspid Valve	12-3*01	15	TGTGCCAGCAGcgctctGGGACTAGCattgggcgctcGAGACCCAGTACTTC C A S S A L G L A L G V E T Q Y F	2*01	2-5*01	1
JF731182	T19	Valve Leaflet	Tricuspid Valve	5-1*01	11	TGCGCCAGCAaaacgcctAACACCGGGGAGCTGTTTTTTT C A S K T P N T G E L F F	none	2-2*01	7
JF731183	T19	Valve Leaflet	Tricuspid Valve	5-1*01	13	TGCGCCAGCAGCcaaGGACAGcattcCTCCTACGAGCAGTATTTTC C A S S Q G Q H S S Y E Q Y F	1*01	2-7*01	10
JF731184	T19	Valve Leaflet	Tricuspid Valve	5-6*01	13	TGTGCCAGCAGCTcaAGGGGaggtgGCAATCAGCCCCAGCATTTT C A S S S R G G G N Q P Q H F	1*01	1-5*01	6
JF731185	B38	Valve Leaflet	Bicuspid Valve	5-1*01	11	TGCGCCAGCAGCTTGGggcaCGGAGATACGCAGTATTTT	2*01	2-3*01	3

C A S S L G H G D T Q Y F

JF731186	B38	Valve Leaflet	Bicuspid Valve	5-1*01	13	TGCGCCAGCAGCgcccGGGACAGGGGACCAAGAGACCCAGTACTTC C A S S A G T G D Q E T Q Y F	1*01	2-5*01	6
JF731187	B38	Valve Leaflet	Bicuspid Valve	5-1*01	13	TGCGCCAGCAGCTTGGcaGGGAGatAttACAGATACGCAGTATTTT C A S S L A G R F T D T Q Y F	2*02	2-3*01	16
JF731188	B38	Valve Leaflet	Bicuspid Valve	5-4*01	14	TGTGCCAGCAGCTTGGaaGGAAaCTCTGGGGCCAACGTCTGACTTTC C A S S L E G N S G A N V L T F	2*01	2-6*01	9
JF731189	T55	Valve Leaflet	Tricuspid Valve	15*01	12	TGTGCCACCAGCAGtGGACAGGGagacGAGACCCAGTACTTC C A T S S G Q G D E T Q Y F	1*01	2-5*01	22
JF731190	T56	Valve Leaflet	Tricuspid Valve	28*01	10	TGTGCCAGCAGTcgaGACgtAGAGACCCAGTACTTC C A S S R D V E T Q Y F	2*01	2-5*01	3
JF731191	T56	Valve Leaflet	Tricuspid Valve	28*01	10	TGTGCCAGCAGTTccccAATCAGCCCCAGCATTTT C A S S S P N Q P Q H F	none	1-5*01	4
JF731192	T56	Valve Leaflet	Tricuspid Valve	28*01	11	TGTGCCAGCAGTTTcgcacCTAACTATGGCTACACCTTC C A S S F A P N Y G Y T F	none	1-2*01	1
JF731193	T56	Valve Leaflet	Tricuspid Valve	28*01	11	TGTGCCAGCAGTGGGgaacagcCCTACGAGCAGTACTTC C A S S G E Q P Y E Q Y F	2*01	2-7*01	2
JF731194	T56	Valve Leaflet	Tricuspid Valve	28*01	12	TGTGCCAGCAGTTTcaGGACcggTACAATGAGCAGTTCTTC C A S S F R T G Y N E Q F F	2*01	2-1*01	2
JF731195	T56	Valve Leaflet	Tricuspid Valve	28*01	12	TGTGCCAGCAGTaaCGttgcGGGcttaTATGGCTACACCTTC C A S S N V A G L Y G Y T F	1*01	1-2*01	2
JF731196	T56	Valve Leaflet	Tricuspid Valve	28*01	12	TGTGCCAGCAGTTccaagcccGGGACAGGGtttCAGTACTTC C A S S S K P G T G F Q Y F	1*01	2-7*01	3
JF731197	T56	Valve Leaflet	Tricuspid Valve	28*01	12	TGTGCCAGCAGTTccaaACAGGGtAACACTGAAGCTTTCTTT C A S S S K Q G N T E A F F	1*01	1-1*01	2

JF731198	T56	Valve Leaflet	Tricuspid Valve	28*01	13	TGTGCCAGCAGacacggggcCAGGGGAATTCACCCCTCCACTTT C A S R H G A R G N S P L H F	1*01	1-6*01	1
JF731199	T56	Valve Leaflet	Tricuspid Valve	28*01	13	TGTGCCAGCAGTTTttcaGACAcCTCTGGAAACACCATATATTTT C A S S F S D T S G N T I Y F	1*01	1-3*01	2
JF731200	T56	Valve Leaflet	Tricuspid Valve	28*01	13	TGTGCCAGCAGTTTATGgcGGGGCtgggCACTGAAGCTTCTTT C A S S L W R G L G T E A F F	1*01	1-1*01	1
JF731201	T56	Valve Leaflet	Tricuspid Valve	28*01	13	TGTGCCAGCAattcACTAGCGGtAGCACAGATACGCAGTATTTT C A S T F T S G S T D T Q Y F	2*01	2-3*01	2
JF731202	T56	Valve Leaflet	Tricuspid Valve	28*01	14	TGTGCCAGCAGgggataggCAGGGGgcccgcgGAGACCCAGTACTTC C A S R G I G R G A A E T Q Y F	1*01	2-5*01	2
JF731203	T56	Valve Leaflet	Tricuspid Valve	28*01	14	TGTGCCAGCAGTcctcgacGGAGaactAACCCGGGAGCTGTTTTTT C A S S P R R R T N T G E L F F	2*02	2-2*01	3
JF731204	T56	Valve Leaflet	Tricuspid Valve	28*01	14	TGTGCCAGCAccccgtaggGGGACggAGCACAGATACGCAGTATTTT C A S T P V G G R S T D T Q Y F	2*01	2-3*01	6
JF731205	T56	Valve Leaflet	Tricuspid Valve	5-8*01	13	TGTGCCAGCAGCGtaACAGGGGgaccgtaTACGAGCAGTACTTC C A S S V T G G P V Y E Q Y F	1*01	2-7*01	1
JF731206	T54	Circulating CD8+CD28neg T cells	Tricuspid Valve	12-3*01	15	TGTGCCAGCAGctccacagggGCGGGAGGGtccgtCAATGAGCAGTTCTTC C A S S S T G A G G S V N E Q F F	2*02	2-1*01	18
JF731207	T55	Circulating CD8+CD28neg T cells	Tricuspid Valve	11-2*01	12	TGTGCCAGCAGCTcGGGACAGGtgCAAGAGACCCAGTACTTC C A S S S G Q V Q E T Q Y F	1*01	2-5*01	14
JF731208	T55	Circulating CD8+CD28neg T cells	Tricuspid Valve	11-3*01	12	TGTGCCAGCAGCTTActGGACAcgcacggTACGCAGTATTTTC C A S S L L D T H G T Q Y F	1*01	2-3*01	6
JF731209	T55	Circulating	Tricuspid	15*01	12	TGTGCCACCAGCGGGACAGGgaggtgggCTGAAGCTTCTTT	1*01	1-1*01	21

JF731229	B46	Circulating CD8+CD28+ T cells	Bicuspid Valve	5-1*01	13	TGCGCCAGCAGCTTGGagtac <u>GGAGGG</u> ggAGATACGCAGTATTTT C A S S L E Y G G G D T Q Y F	2*02	2-3*01	15
JF731230	T57	Circulating CD4 ⁺ T cells	Tricuspid Valve	7-2*01	12	TGTGCCAGCAGactca <u>AGGGG</u> cggaatTATGGCTACACCTTC C A S R L K G R N Y G Y T F	1*01	1-2*01	16
JF731231	T57	Circulating CD4 ⁺ T cells	Tricuspid Valve	7-2*01	12	TGTGCCAGCAGCccc <u>GACAG</u> tgctcagACTGAAGCTTTCTTT C A S S P D S A Q T E A F F	1*01	1-1*01	16
JF731232	B46	Circulating CD4 ⁺ T cells	Bicuspid Valve	5-1*01	13	TGCGCCAGCAGCTTGaccg <u>GGGACAGGG</u> cGAGACCCAGTACTTC C A S S L T G D R A E T Q Y F	1*01	2-5*01	9

*Upper case denotes germ line residues encoded respectively by the TRBV element, TRBD element (underlined) and TRBJ element. Lower case denotes N or P non-germline encoded nucleotides. † The number of identical TCRB sequences found in the sample that comprise the expanded clone, of which only one has been entered in Genbank.