

Report of the 33rd Single Antigen, Flow and Virtual Crossmatch Exchange

December 2, 2024

Cells	193-194
Serum	195-198

In this study, virtual donor V2 and serum 192 (patient 2) from Exchange 32 (June, 2024) are re-examined as cell 193 and serum 195. A comparison of virtual crossmatch predictions (VXM) (**V2 vs. serum 192**) against the physical flow crossmatch (FXM) (**cell 193 vs. serum 195**) are summarized in **Part 1** of this report. **Part 2** examines the Luminex single antigen (SAB)

data for serum sample nos. **195 - 198**. **Part 3** summarizes the FXM results for **cells 193 and 194** against the 4 sera. Finally, in **Part 4**, the VXM predictions for 3 potential donors (V1 - V3) against serum 197 and serum 198 are evaluated.

Part 1

Physical Flow Cytometric Crossmatch vs. Virtual Crossmatch

Direct comparisons of VXM predictions with physical FXM outcomes are shown in Tables 1a – 1c. Sixteen labs submitted virtual crossmatch predictions in Exchange 32. Among them, 11 labs reported back physical FXM results in Exchange 33 (Table 1a). For donor V2 vs. serum 192, 10 of 11 labs predicted the expected T-cell FXM to be positive, and all 11 labs pre-

dicted the expected B-cell FXM to be positive. For the physical FXM (cell 193 vs. serum 195), all 11 labs reported the T-cell FXM as positive and 10 of 11 labs reported the B-cell FXM as positive in the presence of class I and II DSA of > 8000 MFI (Table 1b).

The reporting of DSA and DSA strength was consistent across the 2

Table 1a. Summary of Virtual XM predictions vs. Physical Flow XM outcome - Direct comparison

Exchange 032					Exchange 033				
Virtual Crossmatch - Donor V2 vs. Serum 192					Physical Flow Crossmatch - Cell 193 vs. Serum 195				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V2	192	11	POS(10) Borderline(1)	POS(11)	193	195	11	POS(11)	POS(10) Borderline(1)

Table 1b. Direct comparison of Virtual Crossmatch results vs. Physical Flow Crossmatch results

		T-cell Virtual XM (Exchange 32)					B-cell Virtual XM (Exchange 32)		
		+	-	∅			+	-	∅
Physical T-cell FXM (Exchange 33)	+	10		1	Physical B-cell FXM (Exchange 33)	+	10		
	-					-			
	∅					∅	1		

+ / - = positive/negative ∅ = borderline/not typed

n = number of labs

studies (Table 1c). In Exchange 32, anti-A2 (8600), -DR7 (14487), and -DR53 (10361) reactivity was reported against donor V2. Weak anti-B65 (1216) and -B39 (1304) reactivity was also reported against the donor by some labs.

In the following study (Exchange 33), A2, DR7, and DR53 were once again reported as DSA. MFI values for each were 10471, 15914, and 10567, respectively. The strength of each was similar to the previous study.

Table 1c. Individual Virtual Crossmatch predictions vs. Physical Flow Crossmatch results - Direct Comparison

Cell #187 HLA genotype: A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPA1*01:05-DPB1*04:01:01

Exchange 032					Exchange 033				
Virtual Crossmatch - Donor V2 vs. Serum 192 (Patient 2)					Physical Flow Crossmatch - Cell 193 vs. Serum 195				
Ctr	Virtual T-cell Prediction	Class I DSA(MFI)	Virtual B-cell Prediction	Class II DSA(MFI)	Ctr	T-Cell RESULT	Class I DSA(MFI)	B-Cell RESULT	Class II DSA(MFI)
230	Positive	B39 (2302) A2 (16423)	Positive	DR7 (21817) DR53 (15136)	230	Positive	A2, Bw 4, A39,B65	Positive	DR7, DR53
792	Positive	A2 (7623)	Positive	DR7 (14487) DR53 (9099)	792	Positive	A2(7407)	Positive	DR7(14181), DR53(8922)
2400	Positive	B65 (1251) A2 (7907)	Positive	DR7 (16511) DR53 (12498)	2400	Positive	A*02:01(10622) B*14:02(1932) B*39:06(1887)	Positive	DRB1*07:01(17498) DRB4*01:03(12600)
3753	Positive	A2 (9837)	Positive	DR7 (16568) DR53 (10533)	3753	Positive	A2(10687)	Positive	DR7(17012), DR53 (10545)
3808	Positive	B65 (707) A2 (3570)	Positive	DR7 (13304) DR53 (3282)	3808	Positive	A*02:01(3264), B*39:01(427), B*14:02(604)	Positive	DRB1*07:01(13621), DRB4*01:01(4147)
3966	Positive	B65 (1744) B39 (1451) A2 (9110)	Positive	DR7 (13992) DR53 (8168)	3966	Positive		Positive	
5130	Positive	A2 (8257)	Positive	DR7 (12984) DQ2 (1272) DR53 (10101) DQA1*02 (282)	5130	Positive		Positive	
8001	Positive	B65 (1146) A2 (7075)	Positive	DR7 (13997) DR53 (9669)	8001	Positive	A*02:01(9566), B*14:02(1747), B39(1324)	Positive	DR7 (15827), DRB4*01:03 (10588)
8083	Positive	B65 (1603) A2 (9926)	Positive	DR7 (17031) DR53 (11880)	8083	Positive	A*02:01(13,686), B*14:02(2363), B*39:01(No 39:06 bead) (2242)	Positive	DRB1*07:01(19562), DRB4*01:03(12387)
8103	Borderline	A2 (1000)	Positive	DR7 (2041)	8103	Positive	A*02:01,B*14:02	Borderline	DRB1*07:01,DR53
14262	Positive	B65 (1216) B39 (1521) A2 (7943)	Positive	DR7 (14825) DR53 (11030)	14262	Positive	A*02:01(7529), B*39:06(1305), B*14:02(1468)	Positive	DRB4*01:03(9158), DRB1*07:01(13801)

Part 2

Class I and class II single antigen results for serum samples 195 - 198 are summarized in Tables 12 - 15. Individual listing of results for each par-

ticipating laboratory are listed in Tables 16 – 23. Pretreatment and cutoff values are listed in Table 30.

Antibody Identification

Serum 195 This sample was previously examined as serum 192 in Exchange 32. A comparison of reported antibodies and antibody strength are shown in the following table:

Exchange 32 Class I		Exchange 33 Class I		Exchange 32 Class II		Exchange 33 Class II	
** Serum 192 **		** Serum 195 **		** Serum 192 **		** Serum 195 **	
Antigen	Median	Antigen	Median	Antigen	Median	Antigen	Median
A2	8600	A2	10471	DR1	20022	DR1	20407
A29	2737	A29	3533	DR10	7835	DR10	8747
B13	2997	B13	3723	DR103	20818	DR103	21507
B18	2931	B18	3347	DR12	885	DR12	1370
B27	3056	B27	3899	DR15	22980	DR15	23931
B35	2192	B35	2785	DR16	22795	DR16	23804
B37	1816	B37	2667	DR4	1717	DR4	1296
B38	2658	B38	3515	DR51	17778	DR51	19835
B44	2779	B44	3611	DR53	10361	DR53	10567
B45	1623	B45	1899	DR7	14487	DR7	15914
B46	2325	B46	2990	DR9	12418	DR9	13471
B47	1939	B47	2700				
B49	3948	B49	4867				
B57	11831	B57	14297				
B51	2536	B51	3392				

Strong anti-A2 (10471), -DR7 (15914), and -DR53 (10567) reactivity was reported against cell 193. In addition, a few labs reported B65 (1747) and B39 (1774) as possible DSA as well. Against cell 194, multiple DSA (A2, B62, B37, DR7, and DR10) were reported. Respective MFI's for each were 10471, 2898, 2667, 15914, and 8747.

*(median MFI by SAB)

Genotypes of cells provided by UCLA

Cell 193 (Cauc/Filp): A*02:01:01-A*30:01:01-B*14:02:01-B*39:06:02-C*07:02:01-C*08:02:01-DRB1*07:01:01-DRB1*08:01:01-DRB4*01:03:01-DQA1*02:01-DQA1*04:01-DQB1*02:01:01G-DQB1*04:02:01-DPA1*02:01-DPB1*10:01:01-DPB1*131:01:01

Serum 196: Strong reactivity to a number of 5C, 7C, DR, and DQ specificities was reported in this sample, including reactivity to B62, B71, B72, B56, B49, B63, B75, B57, DR53, DR4, DQ9, D8, and DR10. Each was > 13000 MFI in strength.

Multiple class II DSA (DR53, DR7, DQ4, DQA1*02) were reported against cell 193. Respective MFI's for each were 24722, 5262, 18452, and 13875. DQ2 (6435) was also reported as a DSA by several labs. All but 3 labs indicated there were no class I DSA present against cell 193. Against cell 194, labs reported anti-B62 (18537), -DQ9 (21141), -DR10 (14325), -DR7 (5264), and -DQA1*02 (13875) reactivity.

Serum 197: Strong class I and class II reactivity was detected in this sample, including reactivity to A2 (15561), A69 (13865), and DR1 (12425).

A2 (15561) and A30 (3505) were the reported DSA against cell 193. Against cell 194, anti-A2 (15561), -A74 (5859), -B62 (2152), and -DR10 (2141) reactivity was reported. Additional weak anti-DQ5 (1470) reactivity was also reported by 4 labs against cell 194.

Serum 198: Strong reactivity to a number of 1C and DQ specificities was detected in this sample, including reactivity to A1 (19214), A36 (14813), A11 (13177), A80 (11209), A3 (9504), A29 (9180), DQ6 (24102), DQ5 (19515), and DQA1*01 (22920).

No class I DSA were reported against either cell. With respect to class II, anti-DQ4 (7458) reactivity was reported against cell 193. Against cell 194, anti-DQ5 (19515) and -DQ9 (2106) reactivity was reported.

Cell 194 (Caucasian): A*02:01:01-A*74:03:01-B*15:01:01G-B*37:01:01-C*06:02:01-C*12:03:01-DRB1*07:01:01G-DRB1*10:01:01-DRB4*01:03:01N-DQA1*01:05:01-DQA1*02:01:01-DQB1*03:03:02-DQB1*05:01:01G-DPA1*02:01:01-DPB1*01:01:02-DPB1*10:01:01

Conclusion:

Good agreement (> 90%) was achieved in the reporting of class I and class II antibodies across all 4 sera. In each case, class I antibodies of > 14000 MFI and class II antibodies of > 12000 MFI were present.

A total of 16 labs submitted single antigen data for samples 195 - 198. Fifteen of the 16 labs shared the kit type and pretreatment method used for testing. For kit type (Figure 1), 13 labs (87%) noted using One Lambda's LABScreen Single Antigen kit; among them, 2 labs specified using the LAB-

Screen ExPlex kit. The remaining 2 labs (13%) used kits from Immucor.

For serum pretreatment (Figure 2), 9 labs (60%) indicated they treated the sera with EDTA prior to testing. This is an increase from 6 labs treating with EDTA in the previous study. One lab (6%) treated with DTT, 1 lab (7%) used a combination of FBS with EDTA, and 1 lab (7%) treated with DTBA and absorption. The remaining 3 labs (20%) indicated the sera was untreated prior to testing.

Figure 1. Kit Information breakdown

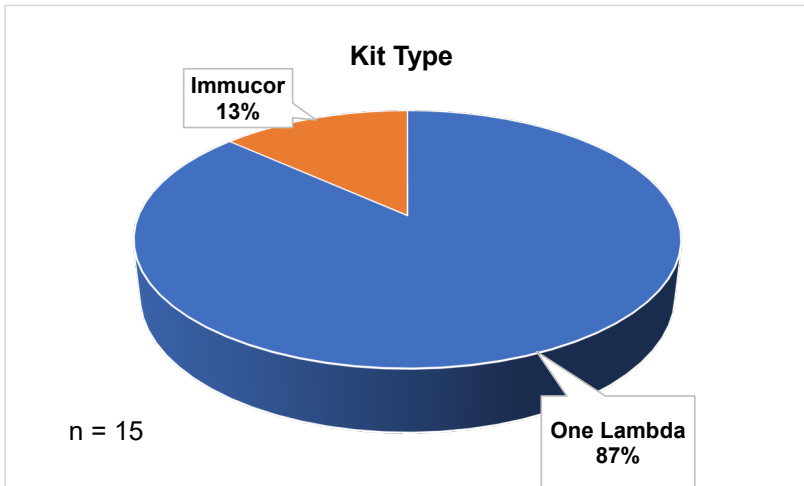
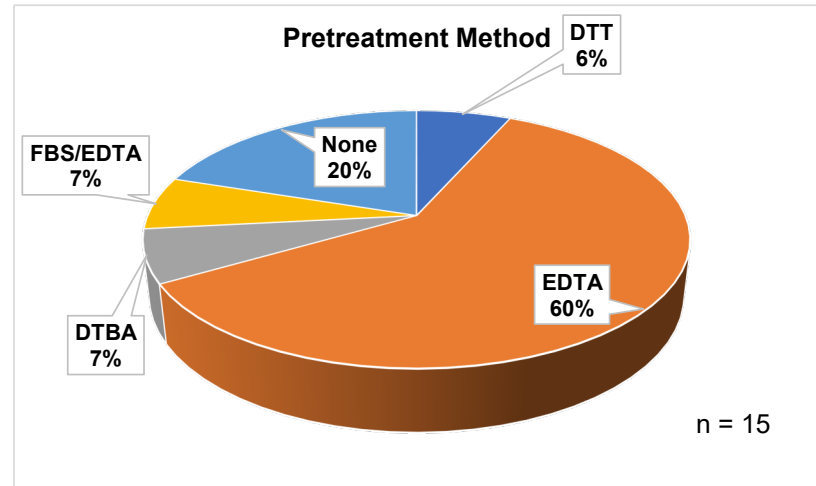


Figure 2. Sera pretreatment breakdown



Part 3

Flow cytometric crossmatch results for cell 193 and cell 194 against serum samples 195 - 198 are summarized in Table 2. Individual results for

each laboratory, along with reported class I and class II DSA for each serum sample, are listed in tables 4 - 11.

Flow Cytometric Crossmatch

Cell 193. For cell 193, $\geq 80\%$ agreement was achieved for 6 of 8 T/B-cell FXM challenges. Among them, 5 were reported as positive in the presence of class I DSA of > 10000 MFI. For the remaining 2 FXM, agreement among labs fell below 80%. A single DSA of < 8000 MFI was reported in each case.

Cell 194. For cell 194, $\geq 80\%$ agreement was achieved for 7 of 8 T/B-cell FXM. Among them, 6 were reported as positive in the presence of class I or class II DSA of > 10000 MFI. For cell 194 vs. serum 198, agreement for the B-cell FXM was just below 80%, as 11 labs reported it as positive and 3 reported it as negative.

Table 2. Summary of Flow crossmatch results for Cell #193- #194 vs. Serum #195 - #198

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
193	195	15	POS(15)	POS(13) Borderline(1) NT(1)	194	195	15	POS(14) NT(1)	POS(14) Borderline(1)
193	196	15	POS(8) NEG(6) NT(1)	POS(14) NT(1)	194	196	15	POS(14) NT(1)	POS(15)
193	197	15	POS(14) Borderline(1)	POS(12) NEG(1) Borderline(1) NT(1)	194	197	15	POS(13) Borderline(1) NT(1)	POS(15)
193	198	15	NEG(14) POS(1)	POS(9) Borderline(4) NEG(1) NT(1)	194	198	15	NEG(14) NT(1)	POS(11) NEG(3) NT(1)

consensus $< 80\%$

Conclusion:

Good agreement ($\geq 80\%$) was achieved for 7 of 8 T-cell FXM. Among them, 5 were reported as positive in the presence of class I DSA of > 10000 MFI. In the case of cell 193 vs serum 196, labs were split in the reporting of T-cell FXM outcomes; 8 reported it as positive and 6 reported it as negative. Seven labs indicated no class I DSA were present, while 3 labs reported weak anti-B65 (1509 ± 540) reactivity against the cell.

Good agreement ($\geq 80\%$) was achieved for 6 of 8 B-cell FXM. Each were reported as positive in the presence of class II and/or class I DSA of > 10000 MFI. For cell 193 vs. serum 198, FXM outcomes were mixed as labs reported the presence of a single DSA (DQ4) of 7458 ± 2284 MFI. For the remaining B-cell FXM, cell 194 vs. 198, the majority of labs ($n = 11$) reported it as positive. DQ5 (19515) and DQ9 (2106) were the reported DSA.

Part 4

Virtual XM predictions for each virtual donor (V1 - V3) against serum samples 197 and 198 are summarized in Table 3 and individual laboratory

predictions are listed in Tables 24 - 29. Fictional donor histories precede each patient-donor summary.

Virtual Crossmatch Paper Challenge

For virtual **T-cell predictions** of the expected T-cell FXM, $\geq 80\%$ agreement was achieved for all 6 challenges. Among them, 5 are predicted to be positive. Class I DSA of > 5000 MFI were present in each case.

For virtual **B-cell predictions** of the expected B-cell FXM, $\geq 80\%$ agreement was achieved for 5 of 6 challenges. Each are predicted to be

positive in the presence of class II and/or class I DSA of > 5000 MFI. For the remaining B-cell challenge (donor V3. vs. serum 198), virtual predictions were mixed among labs. Twelve labs predict the expected B-cell FXM to be negative, 3 predict it to be positive, and 1 predicts borderline results, as some labs indicated no DSA were present and others reported a DSA.

Table 3. Summary of Virtual Crossmatch Predictions (Serum #197 - #198 vs. Donors V1 - V3)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction
V1	197	16	POS(16)	POS(15) NEG(1)	V2	197	16	POS(15) Borderline(1)	POS(15) Borderline(1)
V1	198	16	POS(16)	POS(15)	V2	198	16	POS(15) Borderline(1)	POS(16)
Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction					
V3	197	16	POS(16)	POS(15) NEG(1)					
V3	198	16	NEG(16)	POS(3) NEG(12) Borderline(1)					

consensus $< 80\%$

DSA Identification

Patient 1 (Serum 197)

Patient's fictional case history: This individual is a 23-year-old male being evaluated for his first transplant. **Patient 1's HLA type** is as follows:

A*23:01 A*32:01	B*08:01 B*15:02	C*03:02 C*08:01			
DRB1*08:01 DRB1*15:01	DRB5*01:01	DQA1*01:02:01G	DQB1*05:02, DQB1*06:02	DPA1*01:03	DPB1*01:01, DPB1*03:01:01G

Anti-A1(3917) and –A2 (15561) reactivity was reported against **donor V1**. No class II DSA were reported. In the presence of strong class I DSA, all 16 labs predict the expected T-cell FXM to be positive. For virtual B-cell predictions, 15 labs predict to the expected B-cell FXM to be positive and 1 predicts it to be negative.

Against **donor V2**, multiple DSA (A3, B49, DR52) were reported. Respective strength of each was 5278, 2210, and 2410 MFI. Fifteen labs predict the expected T/B-cell FXM for this donor-patient pair to be positive. One lab predicts borderline T/B-cell FXM results due to low antibody MFI.

Anti-A2 (15561) and –B44 (3379) reactivity was reported against **donor V3**. The majority of labs (n = 13) reported the absence of class II DSA. For virtual predictions, all 16 labs predict the expected T-cell FXM to be positive; 15 labs predict the expected B-cell FXM to be positive due to class I DSA. One lab predicts a negative B-cell FXM.

Virtual Donors – HLA genotype

Donor 1 (V1): A*01:01:01-A*02:01:01-B*13:02:01-B*52:01:01-C*06:02:01-C*12:02:02/DRB1*07:01:01-DRB1*15:02:01G-DRB4*01:03:01-DRB5*01:02:01-DQA1*01:03:01-DQA1*02:01:01-DQB1*02:01:01G-DQB1*06:01-DPA1*01:03:01-DPA1*02:01:01-DPB1*04:01:01G-DPB1*17:01:01

Donor 2 (V2): A*03:01:01-A*23:01:01-B*49:01:01-B*53:01:01-C*04:01:01-C*07:01:02/DRB1*11:01:02-DRB1*16:02:01G-DRB3*02:02:01-DRB5*02:02:01-DQA1*01:02:01-DQA1*01:02:02-DQB1*05:02:01G-DQB1*06:02:01G-DPA1*01:03:01-DPA1*03:01-DPB1*04:01:01G-DPB1*105:01:01

Donor 3 (V3): A*02:06:01 B*15:02:01-B*44:03:02-C*07:06:01-C*08:01:01-DRB1*07:01:01G-DRB1*12:02:01-DRB3*03:01:03-DRB4*01:01:01G-DQA1*02:01:01-DQA1*06:01:01-DQB1*02:01:01G-DQB1*03:01:01G-DPA1*02:02:02-DPB1*05:01:01G

Patient 2 (Serum 198)

Patient's fictional case history: This individual is a 50-year-old male being evaluated for his second transplant. The HLA typing of the first transplant was, A*02:01-A*11:01-B*35:01-B*44:02-C*05:01-DRB1*03:02-DRB1*07:01-DRB3*01:01-DRB4*01:03-DQA1*05:01-DQA1*03:02-DQB1*02:01-DQB1*03:03-DPA1*01:03-DPB1*04:01-DPB1*04:02.

Patient 2's HLA type is as follows:

A*02:01 A*30:01	B*35:01 B*44:02	C*05:01 C*06:02			
DRB1*03:02 DRB1*07:01	DRB3*01:01 DRB4*01:03	DQA1*05:01	DQB1*02:01	DPA1*01:03	DPB1*01:01 DPB1*04:02

Strong anti-A1 (19214) and –DQ6 (24102) reactivity was reported against **donor V1**. In addition, 6 labs reported DQA1*01 (22920) as a DSA. Good agreement was achieved for virtual predictions. All 16 labs predict the expected T-cell FXM to be positive and 15 labs predict the expected B-cell FXM to be positive.

Against **donor V2**, multiple DSA (A3, DQ5, DQ6) were reported. Respective MFI's for each were 9504, 19515, and 24102. Good agreement was achieved among labs for virtual predictions in the presence of strong DSA. For virtual T-cell predictions, 15 labs predict the expected T-cell FXM to be positive and 1 predicts borderline results. For B-cell predictions, all 16 labs predict the expected B-cell FXM to be positive.

All 16 labs noted the absence of class I DSA against **donor V3**. The reporting of class II DSA, however, was mixed among labs. Ten labs indicated no class II DSA were present; 5 labs reported weak anti-DR52 (1655) reactivity against the donor, and 1 other reported DQA1*02 (6832) as a DSA. All 16 labs predict the expected T-cell FXM to be negative. For B-cell predictions, 12 labs predict the expected B-cell FXM to be negative, 3 predict it to be positive, and 1 predicts borderline results.

Conclusion

For **serum 197**, ≥ 80% agreement was achieved among labs across all 6 virtual T/B-cell FXM challenges. Expected T/B-cell FXM are predicted to be positive in the presence of class I DSA of > 5000 MFI. One lab accounted for the discrepancies observed in B-cell predictions.

For **serum 198**, ≥ 80% agreement was achieved among labs for 5 out of 6 virtual T/B-cell FXM challenges. Among them, 4 are predicted to be positive in the presence of strong class I and/or class II DSA of > 9000 MFI.

For serum 198 vs. donor V3, agreement for B-cell predictions fell below 80% as the reporting of DSA was mixed among labs. Ten labs noting the absence of class I and class II DSA predicted the expected B-cell FXM to be negative. Five labs reported DR52 (1655 ± 1579) as a DSA. Among them, 2 predict the expected B-cell FXM to be negative, 2 predict it to be positive, and 1 predicts borderline results. One last lab reported DQA1*02 as DSA and predicts the expected B-cell FXM to be positive.

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Flow Cytometric Crossmatch

Cell 193 HLA genotype: A*02:01:01-A*30:01:01-B*14:02:01-B*39:06:02-C*07:02:01-C*08:02:01-DRB1*07:01:01-DRB1*08:01:01-DRB4*01:03:01-DQA1*02:01-DQA1*04:01-DQB1*02:01:01G-DQB1*04:02:01-DPA1*02:01-DPB1*10:01:01-DPB1*131:01:01

Table 4. Individual Flow crossmatch results and DSA reported for Cell #193 vs. Serum #195

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	195	1.9	4.2			Positive	A2, BW4, A39,B65	3.9	7.2			Positive	DR7, DR53	0.911	2.03	YES
615	195	287	210			Positive	A*02(8660) B*14:02(1496) B*39(1307)	N/A				NT		241	N/A	YES
792	195	57	198			Positive	A2(7407)	107	395			Positive	DR7(14181), DR53(8922)	246	312	YES
2400	195	48	163	NA	NA	Positive	A*02:01(10622) B*14:02(1932) B*39:06(1887)	64	304	NA	NA	Positive	DRB1*07:01(17498) DRB4*01:03(12600)	279	384	YES
3224	195		214			Positive			336			Positive				YES
3753	195	50	235			Positive	A2(10687)	100	429			Positive	DR7(17012), DR53 (10545)	250	332	YES
3808	195	306	185			Positive	A*02:01(3264), B*39:01(427), B*14:02(604)	479	268			Positive	DRB1*07:01(13621), DRB4*01:01(4147)	238	367	YES
3966	195	20	134			Positive		50	223			Positive		137	300	NO
5130	195	61	492			Positive		77	739			Positive		364	505	YES
5214	195	700	12000			Positive	A2(25,000 MFI), B39(6,000 MFI), B65(6,000 MFI)	1500	15000			Positive	DR7 (35,000 MFI)	0	0	YES
8001	195	50	273			Positive	A*02:01(9566), B*14:02(1747), B39(1324)	100	395			Positive	DR7 (15827), DRB4*01:03 (10588)	204	350	YES
8083	195	74	154			Positive	A*02:01(13,686), B*14:02(2363), B*39:01(No 39:06 bead) (2242)	108	280			Positive	DRB1*07:01(19562), DRB4*01:03(12387)			YES
8103	195	644	509,6	1,2		Positive	A*02:01,B*14:02	2907	2249,1	1,7		Borderline	DRB1*07:01,DR53	134,4	657,9	NO
8111	195	76	1457			Positive	A2(10000), B39(1600), B65(2000)	114	16054			Positive	DR7(16000), DR53(11000), DQ2(1000)	243	389	YES
14262	195	67	230			Positive	A*02:01(7529), B*39:06(1305), B*14:02(1468)	82	439			Positive	DRB4*01:03(9158), DRB1*07:01(13801)	236	301	YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #193 vs. Serum #196

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	196	1.9	1.58			Negative	No Class I DSA	3.9	5.86			Positive	DR53, DQ4, DR7, DQ2, DQA1*02, DQA1*04	0.911	2.03	YES
615	196	287				NT		N/A				NT		241	N/A	YES
792	196	57	71			Positive	No Class I DSA	107	259			Positive	DR53(23949),DQ4(4313), DQ2(15881),DR7(4708)	246	312	YES
2400	196	48	104	NA	NA	Positive	No Class I DSA	64	317	NA	NA	Positive	DRB1*07:01(5283) DRB4*01:03(24493) DQB1*02:01(7986) DQB1*04:02(6062)	279	384	YES
3224	196		25			Positive			235			Positive				YES
3753	196	50	49			Negative	No Class I DSA	100	316			Positive	DR53 (31105), DQ4(8163), DR7(3573), DQA1*02(4190)	250	332	YES
3808	196	306	-6			Negative	No Class I DSA	479	169			Moderate Positive	DRB1*07:01(3047), DQA1*02:01(1519)	238	367	YES
3966	196	20	46			Positive		50	250			Positive		137	300	NO
5130	196	61	392			Negative		77	669			Positive		364	505	YES
5214	196	700	1400			Positive	A2 (4,000 MFI), B65 (2,000 MFI)	1500	46000			Positive	DR7(9,000 MFI), DR53(50,000 MFI), DQ4 (30,00) MFI)	0	0	YES
8001	196	50	110			Positive	B*14:02 (932)	100	268			Positive	DR7(3719), DRB4*01:03(27411), DQB1*04:02(6026), DQA1*02:01(17005) DQA1*04:01(1729)	204	350	YES
8083	196	74	64			Negative	No Class I DSA	108	178			Positive	DRB1*07:01(6243), DRB4*01:03(30028), DQB1*04:02(8968)			YES
8103	196	644	509,6	1,2		Positive	No Class I DSA	2907	2249,1	1,7		Positive	DQB1*04:02, DRB1*07:01,DR53, DQA1*02:01,DQA1*04:01	134,4	657,9	NO
8111	196	76	162			Positive	B65(800)	114	5533			Positive	DR7(5600),DR53(25000), DQ4(9600), DQA1*02(5000)	243	389	YES
14262	196	67	48			Negative	B*14:02 (1017)	82	315			Positive	DQA1*02 (3833), DQB1*04:02 (1597), DRB1*07:01 (3082), DRB4*01:03 (25155)	236	301	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #193 vs. Serum #197

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	197	1.9	2.22			Positive	A2, A30	3.9	3.61			Borderline	Due to class I	0.911	2.03	YES
615	197	287	260			Strong Positive	A*02(18193) A*30(6149) C*08(505)	N/A				NT		241	N/A	YES
792	197	57	258			Positive	A2(15050), A30(2899)	107	273			Positive	No Class II DSA	246	312	YES
2400	197	48	383	NA	NA	Positive	A*02:01(15143) A*30:01(3003)	64	328	NA	NA	Positive	None Detected	279	384	YES
3224	197		332			Positive			245			Positive				YES
3753	197	50	331			Positive	A2(19009), A*30:01 (4670)	100	285			Positive	No Class II DSA	250	332	YES
3808	197	306	297			Strong Positive	A*02:01(8393), A*30:01(1294)	479	221			Positive	No CClass II DSA	238	367	YES
3966	197	20	199			Positive		50	213			Positive		137	300	NO
5130	197	61	392			Positive		77	669			Negative		364	505	YES
5214	197	700	27000			Positive	A2 (30,000 MFI), A30:01 (8,000 MFI)	1500	53000			Positive	No Class II DSA	0	0	YES
8001	197	50	360			Positive	A*02:01 (16663), A*30:01 (4380)	100	293			Positive	No Class II DSA	204	350	YES
8083	197	74	180			Positive	A*02:01(18,381), A*30:01(3907),	108	151			Positive	No Class II DSA			YES
8103	197	644	509,6	1,2		Borderline	A*02:01,A*30:01	2907	2249,1	1,7		Positive	No Class II DSA	134,4	657,9	NO
8111	197	76	3857			Positive	A2(15000), A30(3000)	114	7399			Positive	No Class II DSA	243	389	YES
14262	197	67	320			Positive	A*02:01(12975), A*30:01(2409)	82	322			Positive	No Class II DSA	236	301	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #193 vs. Serum #198

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	198	1.9	0.988			Negative	No Class I DSA	3.9	3.8			Borderline	DQ4	0.911	2.03	YES
615	198	287	-51			Negative		N/A				NT		241	N/A	YES
792	198	57	-7			Negative	No Class I DSA	107	113			Positive	DQ4(6558)	246	312	YES
2400	198	48	12	NA	NA	Negative	No Class I DSA	64	129	NA	NA	Positive	DQB1*04:02(11380)	279	384	YES
3224	198					Negative			37			Positive				YES
3753	198	50	2			Negative	No Class I DSA	100	111			Positive	DQ4 (6866)	250	332	YES
3808	198	306	-84			Negative	No Class I DSA	479	-8			Borderline	DQB1*04:02(2044)	238	367	YES
3966	198	20	13			Negative		50	50			Borderline		137	300	NO
5130	198	61	357			Negative		77	507			Negative		364	505	YES
5214	198	700	0			Negative	No Class I DSA	1500	6000			Positive	DQ4 (10,000 MFI)	0	0	YES
8001	198	50	6			Negative	No Class I DSA	100	102			Positive	DQB1*04:02 (7424)	204	350	YES
8083	198	74	65			Negative	No Class I DSA	108	109			Positive	DQB1*04:02(10,778)			YES
8103	198	644	509,6	1,2		Positive	No Class I DSA	2907				Borderline	DQB1*04:02	134,4	657,9	NO
8111	198	76	0			Negative	No Class I DSA	114	742			Positive	DQ4(6000)	243	389	YES
14262	198	67	0			Negative	No Class I DSA	82	105			Positive	DQB1*04:02 (6132)	236	301	YES

Cell 194 HLA genotype: A*02:01:01-A*74:03:01-B*15:01:01G-B*37:01:01-C*06:02:01-C*12:03:01/DRB1*07:01:01G-DRB1*10:01:01-DRB4*01:03:01N- DQA1*01:05:01-DQA1*02:01:01-DQB1*03:03:02-DQB1*05:01:01G-DPA1*02:01:01-DPB1*01:01:02-DPB1*10:01:01

Table 8. Individual Flow crossmatch results and DSA reported for Cell #194 vs. Serum #195

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA ()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	195	2.2	3.4			Positive	A2,B62,B37	4	4.52			Positive	DR7, DR10,DQA1*02	1.19	1.94	YES
615	195	N/A				NT	A*02(8660) B*15:01(2573) B*37(2728)	516	224			Positive	DR*07 (13142) DR*10 (7276)	N/A	451	YES
792	195	57	211			Positive	A2(7407), B37(1984)	107	395			Positive	DR7(14181), DR10(8709)	229	288	YES
2400	195	48	269	NA	NA	Positive	A*02:01(10622) B*15:01(3200) B*37:01(3405)	64	457	NA	NA	Positive	DRB1*07:01(17498) DRB1*10:01(9627) DRB4*01:03(12600)	278	339	YES
3224	195		228			Positive			389			Positive				YES
3753	195	50	172			Positive	A2(10687), B37(1905), B62(2898)	100	447			Positive	DR10(11424), DR7 (17012)	252	293	YES
3808	195	329	201			Positive	A*02:01(3264), B*15:01(854), B*37:01(672)	410	326			Strong Positive	DRB1*07:01(13621),D RB1*10:01(3705)	260	298	YES
3966	195	20	84			Positive		50	149			Positive		134	284	NO
5130	195	61	514			Positive		77	742			Positive		362	443	YES
5214	195	700	9000			Positive	A2(25,000 MFI), B37(9,000 MFI), B62(10,000 MFI)	1500	100000			Positive	DR7 (35,000 MFI), DR10 (20,00) MFI)	0	0	YES
8001	195	50	262			Positive	A*02:01(9566), B*15:01(2934), B37(2667), Bw4(15482 - 2667)	100	440			Positive	DR7(15827) DR10(8433)	196	285	YES
8083	195	74	86			Positive	A*02:01(13,686), B*15:01(62)(4028), Bw4(19,403), B*37:01(4476)	108	152			Positive	DRB1*07:01(19,562), DRB1*10:01(10,761)			YES
8103	195	733	590,2	1,2		Positive	A*02:01,B*14:02	1545	1171	1,7		Borderline	DRB1*07:01, DRB1*10:01,DR53	142,8	374	NO
8111	195	76	931			Positive	A2(10000), B37(3000), B62(3000), Bw4(4000)	114	8410			Positive	DR7(16000), DR10(8700)	165	245	YES
14262	195	67	219			Positive	A*02:01(7529), B*37:01(2324), B*15:01(2264)	82	456			Positive	DRB1*07:01(13801), DRB*10:01(6003)	215	259	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #194 vs. Serum #196

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	196	2.2	3.27			Positive	B62	4	5.66			Positive	DR10,DQ9, DR7,DQA1*02	1.19	1.94	YES
615	196	N/A				NT	B*15:01(24137) B*37(2260) C*06(1461)	516	217			Positive	DRB1*07:01(4549), DRB1*10:01(14903), DQB1*03:03(24243)	N/A	451	YES
792	196	57	297			Positive	B62(18663)	107	346			Positive	DQ9(13943), DR10(15061), DR7(4708)	229	288	YES
2400	196	48	387	NA	NA	Positive	B*15:01(14230)	64	445	NA	NA	Positive	DRB1*07:01(5283) DRB1*10:01(12854) DRB4*01:03(24493) DQB1*03:03(20490) DQA1*02:01(7986)	278	339	YES
3224	196		381			Positive			384			Positive				YES
3753	196	50	310			Positive	B62(20594)	100	401			Positive	DQ9(21282), DR10 (17244), DQA1*02(4190), DR7(3573)	252	293	YES
3808	196	329	322			Strong Positive	B*15:01(8793)	410	338			Strong Positive	DRB1*07:01(3047), DQB1*03:03(9999), DQA1*02:01(1519)	260	298	YES
3966	196	20	292			Positive		50	287			Positive		134	284	NO
5130	196	61	695			Positive		77	772			Positive		362	443	YES
5214	196	700	37000			Positive	A2(4,000 MFI), B37(4,000 MFI), B62(40,000 MFI)	1500	100000			Positive	DR7(9,000 MFI), DR10(30,000 MFI), DQ9(30,000 MFI)	0	0	YES
8001	196	50	374			Positive	B*15:01(20957), B37(1105)	100	375			Positive	DR7(3719), DR10(14650), DQ9(25984), DQA1*02:01(17005)	196	285	YES
8083	196	74	315			Positive	B*15:02(62) (22,899)	108	348			Positive	DRB1*07:01(6243), DRB1*10:01(20,643), DQB1*03:03(9) (28,186)			YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #194 vs. Serum #196, cont.

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8103	196	733	590,2	1,2		Positive	B*15:01,B*37:01	1545	1171	1,7		Positive	DRB1*07:01, DRB1*10:01,DR53, DQB1*03:03, DQA1*02:01	142,8	374	NO
8111	196	76	3318			Positive	B62(19000), B37(1600)	114	6428			Positive	DR10(14000), DR7(5600), DQ9(21000), DQA1*02(5000)	165	245	YES
14262	196	67	364			Positive	B*37:01 (2078), B*15:01 (18145)	82	451			Positive	DRB1*07:01(3082), DRB1*10:01(11324), DQB1*03:03(13121), DQA1*02(3833)	215	259	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #194 vs. Serum #197

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	197	2.2	2.56			Positive	A2,A74	4	3.82			Positive	DR10, Class I	1.19	1.94	YES
615	197	N/A				NT	A*02:01 (18193), A*74:01 (11001), B*15:01 (3198)	516	128			Moderate Positive	DRB1*10:01(2123), DQB1*05:01(1962)	N/A	451	YES
792	197	57	276			Positive	A2(15050), A74(5701), B62(1786)	107	261			Positive	DR10(2191)	229	288	YES
2400	197	48	345	NA	NA	Positive	A*02:01(15143) A*74:03(5640) B*15:01(1800)	64	310	NA	NA	Positive	DRB1*10:01(6297) DQB1*05:01(4424) DPB1*01:01(1212)	278	339	YES
3224	197		353			Positive			276			Positive				YES
3753	197	50	286			Positive	A2(19009), A74(8392), B62(2463)	100	274			Positive	DR10(1728)	252	293	YES
3808	197	329	266			Strong Positive	A*02:01(8393), A*74:01(1671)	410	240			Positive	No Class II DSA	260	298	YES
3966	197	20	198			Positive		50	179			Positive		134	284	NO
5130	197	61	695			Positive		77	772			Positive		362	443	YES
5214	197	700	22000			Positive	A2(30,000 MFI), A74(16,00) MFI), B62(5,000 MFI)	1500	31000			Positive	DR10(3,000 MFI)	0	0	YES
8001	197	50	343			Positive	A2(16663), A74(8089), B*15:01(2152)	100	298			Positive	DR10(2129), DQB1*05:01(1470)	196	285	YES
8083	197	74	174			Positive	A*02:01(18,381), A*74:01(8,392), B*15:01(62)(2,464)	108	146			Positive	No Class II DSA			YES
8103	197	733	590,2	1,2		Borderline	A*02:01,B*15:01	1545	1171	1,7		Positive	DRB1*10:01	142,8	374	NO
8111	197	76	2008			Positive	A2(15000), A74(6000), B62(2000)	114	2585			Positive	DR10(2000), DQ5(1000)	165	245	YES
14262	197	67	311			Positive	A*02:01 (12975), B*15:01 (1380), A*74:03 (4577)	82	298			Positive	DRB1*10:01(2141)	215	259	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #194 vs. Serum #198

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA()	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA()	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	198	2.2	1.31			Negative	No Class I DSA	4	4.2			Positive	DQ5	1.19	1.94	YES
615	198	N/A				NT		516				NT		N/A	451	YES
792	198	57	-8			Negative	No Class I DSA	107	164			Positive	DQ5(16029)	229	288	YES
2400	198	48	11	NA	NA	Negative	No Class I DSA	64	186	NA	NA	Positive	DQB1*03:03(3965) DQB1*05:01(23482)	278	339	YES
3224	198					Negative			155			Positive				YES
3753	198	50	0			Negative	No Class I DSA	100	182			Positive	DQ5(21026), DQ9(1774)	252	293	YES
3808	198	329	-127			Negative	No Class I DSA	410	55			Weak Positive	DQB1*05:01(7869), DQA1*01(4064)	260	298	YES
3966	198	20	0			Negative		50	9			Negative		134	284	NO
5130	198	61	342			Negative		77	611			Positive		362	443	YES
5214	198	700	14			Negative	No Class I DSA	1500	9000			Positive	DQ5 (30,000 MFI), DQ9 (3,000 MFI)	0	0	YES
8001	198	50	-6			Negative	No Class I DSA	100	186			Positive	DQ9 (2013), DQB1*05:01 (20393)	196	285	YES
8083	198	74	-47			Negative	No Class I DSA	108	-55			Negative	No Class II DSA			YES
8103	198	733	590,2	1,2		Negative	No Class I DSA	1545	1171	1,7		Negative	No Class II DSA	142,8	374	NO
8111	198	76	2			Negative	No Class I DSA	114	890			Positive	DQ5(17800)	165	245	YES
14262	198	67	0			Negative	No Class I DSA	82	175			Positive	DQB1*05:01 (17771), DQB1*03:03 (1076)	215	259	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #195

*** Serum 195 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B57	16	100%	14297	15118	6340	5505	35000
B58	16	100%	11760	12419	5573	4867	30000
A2	16	100%	10471	10938	4434	4309	25000
B49	16	100%	4867	5353	3004	1219	15000
B59	16	100%	4846	5348	2950	1506	15000
B53	16	100%	4534	4946	2570	1258	13000
B63	16	100%	4080	4635	2512	1344	13000
B13	16	100%	3723	3985	1958	935	10000
B44	16	100%	3611	3976	1936	1031	10000
A29	16	100%	3533	3543	1822	584	8000
B38	16	100%	3515	3998	2397	917	12000
B51	16	100%	3392	3626	1754	822	9000
B18	16	100%	3347	3729	2135	998	11000
B55	16	100%	3333	3584	2007	799	10000
B54	16	100%	2950	3322	1723	1001	9000
B52	16	100%	2884	3178	1769	877	9000
B56	16	100%	2860	3233	1981	647	10000
B35	16	100%	2785	3104	1727	684	9000
B77	16	100%	2664	2960	1505	1131	8000
B71	16	100%	2597	2937	1754	725	9000
B67	16	100%	2596	2906	1569	531	8000
B72	16	100%	2388	2883	1769	698	9000
B27	15	93%	3899	4494	2616	1288	13000
B46	15	93%	2990	3445	2002	581	10000
B62	15	93%	2898	3255	1962	854	10000
B47	15	93%	2700	2948	1571	1076	8000
B37	15	93%	2667	3065	1864	672	9000
B45	15	93%	1899	2282	1412	549	7000
B75	14	87%	2088	2364	1444	562	7000
B64	14	87%	2040	2411	1386	829	7000
B78	12	75%	1729	2073	1298	539	6000
B76	12	75%	1581	1862	1081	439	5000
B65	11	68%	1747	2129	1329	604	6000
B82	11	68%	1407	1667	814	913	4000
B39	10	62%	1774	2199	1326	1307	6000
B50	10	62%	1507	1792	1153	476	5000
Bw4	7	43%	12929	12286	5173	4000	19403

*** Serum 195 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR15	16	100%	23931	25384	7253	18156	50000
DR16	16	100%	23804	24760	7519	16911	50000
DR103	16	100%	21507	22800	7575	16022	50000
DR1	16	100%	20407	21443	6686	14428	45000
DR51	16	100%	19835	20536	5906	13674	40000
DR7	16	100%	15914	17046	5147	13054	35000
DR9	16	100%	13471	14294	4908	7311	30000
DR53	16	100%	10567	10867	3400	4147	20000
DR10	16	100%	8747	9281	3882	3705	20000
DR4	5	31%	1296	1542	835	734	3000
DQA1*05	3	18%	2006	2079	613	1368	2865
DQ2	1	6%	2352	2352	-	2352	2352
DR12	1	6%	1370	1370	-	1370	1370
DQA1*06	1	6%	1267	1267	-	1267	1267

Blue = DSA against cell #193 only
Gold = DSA against cell #194 only
Green = DSA against cell #193 and #194

Table 13. Summary of Single Antigen results for Serum #196

*** Serum 196 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B62	16	100%	18537	19048	6793	8793	40000
B71	16	100%	17137	16635	5344	6525	30000
B72	16	100%	17080	17130	6263	7097	35000
B56	16	100%	16545	16168	5585	5764	30000
B49	16	100%	15830	15638	5349	6704	30000
B63	16	100%	14741	14878	5156	6622	30000
B75	16	100%	14714	15140	5669	5763	30000
B57	16	100%	13322	13885	5663	4700	30000
B50	16	100%	13235	13522	5353	6137	30000
B35	16	100%	12073	12412	5711	3875	30000
B77	16	100%	11714	11828	3551	6477	20000
B46	16	100%	11005	11290	5046	2919	25000
B52	16	100%	10652	10582	3701	4371	20000
B53	16	100%	10548	10575	3922	4093	20000
B76	16	100%	10501	10377	3983	3937	20000
B51	16	100%	9656	10169	4542	2130	20000
Cw9	16	100%	8359	8406	4236	1651	20000
B78	16	100%	7978	8473	3926	3023	20000
B58	16	100%	7776	8238	3940	2844	20000
Cw10	16	100%	7688	8032	4227	1630	20000
B13	16	100%	4291	4710	2433	1205	10195
B55	15	93%	4845	5270	2622	1387	13000
B45	13	81%	2695	3077	1693	805	8000
B44	13	81%	2613	3203	1901	1363	9000
B37	8	50%	1620	1831	962	539	4000
B64	8	50%	1267	1643	1059	639	4000
B18	7	43%	1186	1543	843	506	3000
B42	6	37%	1597	1681	662	894	3000
B54	5	31%	1193	1540	762	656	2500
B65	4	25%	1509	1517	540	941	2111
B82	4	25%	1255	1311	494	735	2000
B59	3	18%	1276	1513	382	1212	2053
B48	2	12%	12462	12461	2480	9982	14941
B4005	2	12%	11428	11427	1224	10204	12651
A69	2	12%	820	819	37	783	856
B15	1	6%	12674	12674	0	12674	12674
Bw6	1	6%	11115	11115	0	11115	11115

*** Serum 196 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR53	16	100%	24722	25143	7954	13282	50000
DR4	16	100%	22402	23231	5263	17699	40000
DQ9	16	100%	21141	21473	4987	9999	30000
DQ8	16	100%	19972	20897	5392	10026	30000
DR10	16	100%	14325	14688	5657	3900	30000
DR9	16	100%	11283	11675	3538	4461	20000
DQ6	16	100%	7632	7894	4092	1596	20000
DR7	16	100%	5264	5210	1695	3047	9000
DR1	15	93%	4973	5235	1830	2233	10000
DQ4	14	87%	18452	16925	7432	7233	30000
DQA1*03	13	81%	20041	20812	5403	10026	30000
DQA1*02	13	81%	13875	13157	7045	4190	30000
DR14	13	81%	11117	11148	3868	3605	20000
DQA1*06	9	56%	8000	6893	3037	3404	11378
DQA1*04	6	37%	2965	3510	1128	2265	5636
DQ2	5	31%	6435	8194	4225	3527	15881
DQ7	4	25%	14181	14198	3470	9389	19043
DR51	4	25%	1614	1858	690	1205	3000
DR1404	2	12%	6456	6456	1490	4966	7946
DQ3	1	6%	20041	20041	-	20041	20041

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 14. Summary of Single Antigen results for Serum #197

*** Serum 197 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	16	100%	15561	16217	4477	8795	30000
A69	16	100%	13865	13830	4118	6784	25000
A74	16	100%	5859	6964	3187	1671	16000
A68	16	100%	5578	6685	2851	2185	15000
A31	16	100%	5572	6188	2746	1665	14000
A3	16	100%	5278	6396	2863	1984	15000
A66	16	100%	5102	6233	2885	2013	15000
A33	16	100%	5085	6045	2362	1754	12000
A11	16	100%	5033	5494	2142	2158	10000
A34	16	100%	4949	5740	2461	1860	13000
B76	16	100%	4761	4824	1656	1610	9000
A29	16	100%	4278	4648	1954	1088	10000
A1	16	100%	3917	4120	1975	776	10000
A80	16	100%	3838	3998	1808	936	9000
B44	16	100%	3379	3339	1031	1575	6000
B45	16	100%	3306	3355	1234	1403	7000
A36	16	100%	2929	3123	1170	916	6000
A26	15	93%	2918	3285	1213	1719	6000
A43	15	93%	2700	2907	919	1686	5000
B56	15	93%	2301	2363	589	1509	4000
B49	14	87%	2210	2351	655	1575	4000
B62	13	81%	2152	2356	894	1381	5000
A30	12	75%	3505	3926	1707	1294	8000
B67	9	56%	1624	1824	431	1190	2500
Cw9	8	50%	2085	2173	505	1571	3000
B55	8	50%	1363	1614	593	1023	3000
B50	7	43%	1400	1681	611	1171	3000
Cw17	6	37%	1741	1908	745	1090	3277
B57	5	31%	1100	1262	296	954	1790
B72	5	31%	1100	1313	388	965	2000
B71	4	25%	1264	1383	388	1008	2000
A203	3	18%	12042	11829	1957	9333	14113
B41	3	18%	1272	1424	422	1000	2000
A6601	2	12%	2808	2808	1075	1733	3883
A6602	2	12%	2766	2765	753	2013	3518
B82	2	12%	1085	1084	226	859	1310
B42	2	12%	1051	1050	51	1000	1101

*** Serum 197 ***							
14 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR1	16	100%	12425	13936	4688	4832	25000
DR4	14	87%	6165	6920	2585	2502	12013
DR17	14	87%	2272	2700	1505	780	7405
DR18	14	87%	2231	2636	1369	885	6485
DR10	13	81%	2141	2781	1401	1471	6658
DR52	11	68%	2410	3038	1365	1811	6417
DR14	10	62%	12507	12480	3045	8319	17834
DR103	7	43%	1200	1557	1034	733	4047
DQ5	5	31%	1470	1709	455	1259	2483
DQA1*03	5	31%	1334	1535	559	1000	2594
DP11	2	12%	3805	3804	2168	1637	5972
DQ4	2	12%	968	968	79	889	1047
DPw1	1	6%	2595	2595	-	2595	2595
DR3	1	6%	2316	2316	-	2316	2316
DQ9	1	6%	1431	1431	-	1431	1431
DQ8	1	6%	1074	1074	-	1074	1074
DQ7	1	6%	1027	1027	-	1027	1027

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 15. Summary of Single Antigen results for Serum #198

*** Serum 198 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A1	16	100%	19214	18684	5287	6613	30000
A36	16	100%	14813	14295	3474	4823	20000
A11	16	100%	13177	12984	3645	2899	20000
A80	16	100%	11209	10920	3664	1863	20000
A3	16	100%	9504	9651	3413	2646	20000
A29	16	100%	9180	9463	3735	1824	20000
A43	16	100%	7111	6851	2164	1151	10000
A26	16	100%	6274	6214	1954	1207	10000
A66	13	81%	3201	3049	996	669	4396
B63	13	81%	3000	2867	1023	1237	5000
A25	13	81%	2361	2353	818	792	4000
A24	13	81%	1900	1949	576	1101	3000
A34	11	68%	2243	2177	752	1079	4000
B78	5	31%	1117	1278	569	548	2291
A6601	4	25%	3698	3766	2293	669	7000
A30	3	18%	1358	1370	241	1081	1671
A2403	2	12%	2859	2859	769	2090	3628
Cw2	2	12%	1218	1218	57	1161	1275
Cw15	2	12%	1129	1129	86	1043	1215
A1102	1	6%	13588	13588	-	13588	13588
A1101	1	6%	13048	13048	-	13048	13048
B15	1	6%	3809	3809	-	3809	3809
Bw4	1	6%	3628	3628	-	3628	3628
B7	1	6%	2737	2737	-	2737	2737
B7801	1	6%	2291	2291	-	2291	2291
B51	1	6%	1793	1793	-	1793	1793
A6602	1	6%	1520	1520	-	1520	1520
B57	1	6%	1315	1315	-	1315	1315
B75	1	6%	1017	1017	-	1017	1017
Cw5	1	6%	980	980	-	980	980
A74	1	6%	544	544	-	544	544
A33	1	6%	517	517	-	517	517

*** Serum 198 ***							
16 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ6	16	100%	24102	23261	5429	11877	35000
DQ5	16	100%	19515	18918	4668	7869	30000
DQ4	16	100%	7458	7571	2284	2044	11391
DQ9	10	62%	2106	2311	790	1202	4230
DQ8	9	56%	2398	2367	745	1366	4000
DQA1*01	5	31%	22920	21129	5928	11877	27030
DR52	3	18%	1655	2679	1579	1472	4910
DR4	2	12%	1945	1944	1024	921	2968
DR1	2	12%	1416	1416	776	640	2192
DQA1*03	1	6%	8681	8681	-	8681	8681
DQ3	1	6%	2676	2676	-	2676	2676
DP15	1	6%	2266	2266	-	2266	2266

Blue = DSA against cell #193 only
Gold = DSA against cell #194 only
Green = DSA against cell #193 and #194

Table 16a. Individual laboratory results for Serum #195 - class I by One Lambda Single Antigen

**** Serum 195 ****																							
Ctr	A2	A29	B13	B18	B35	B38	B44	B49	B51	B52	B53	B54	B55	B56	B57	B58	B59	B63	B67	B71	B72	B77	B27
230	14311	6324	5738	5403	4255	6353	5810	8325	5310	4886	7421	5025	5841	4637	20900	17628	8299	7289	4231	3962	4206	4213	5385
615	9199	2786	3606	3094	2562	3376	3698	4533	3383	2733	4313	2698	2906	2679	12105	9971	4692	3798	2425	2249	2251	2527	4240
792	7407	2121	2771	2567	1925	2482	2293	2528	2605	1947	2755	2068	1705	1695	10520	8083	3342	2872	1855	1803	1833	1789	2147
2400	11354	4126	3840	3908	3164	4070	4227	5797	3793	3356	5377	3892	3531	3399	14817	12519	5420	5095	3263	3216	3177	3222	3899
3224	12209	3746	4466	3721	3217	4148	4246	5684	4021	3284	5320	3330	3706	3360	15607	12984	5532	4545	2707	3057	3058	3057	5167
3632	11069	2250	3215	2507	2668	3013	3398	4129	3122	2455	3659	2629	2891	2704	13429	9481	3782	3648	2924	3039	2409	2123	
3753	10687	4842	4034	3751	2862	3653	3188	5474	3117	2768	5404	3208	3644	3015	17341	14301	5753	4233	2076	2247	2353	2523	3783
5130	10983	3369	3485	2761	2539	3218	3622	4320	2759	2217	4468	2576	3266	2531	14537	13356	4123	3556	2016	2004	2138	2134	3970
5214	25000	8000	10000	11000	9000	12000	10000	15000	9000	9000	13000	9000	10000	10000	35000	30000	15000	13000	8000	9000	9000	8000	13000
8001	10255	3696	4654	3768	3027	4044	4253	5565	3944	3231	5322	3398	3711	3235	15482	12706	5584	4428	2572	2642	2601	3005	5088
8083	14694	4870	5507	4818	4063	5185	5694	7030	4961	4180	6568	4105	4626	4272	19403	15958	6913	5830	4067	3884	3656	3851	6534
8103	7927	3033	3871	2940	2708	3278	3442	4443	3705	3177	4205	2899	2980	2328	10466	9141	4411	3926	2450	2552	2367	3003	3878
8111	10000	3900	3300	3600	2900	3800	3600	5200	3400	3000	4600	3000	3400	3100	14000	11000	5000	4400	3000	2700	2800	2800	3600
14262	7759	1745	2540	2828	2331	2469	2703	3881	2330	2153	3115	2339	2611	2368	14057	10237	3596	3310	2619	2257	2022	1900	2811
Avg	11632	3915	4359.1	4047.6	3373	4363.5	4298.1	5850.6	3961	3456	5394.8	3583	3915.6	3523.1	16262	13383	5817.6	4995	3158	3187	3134	3153	4884.8
Std																							
Dev.S	4423.3	1697	1867.6	2168	1733	2424.6	1909.5	2985.2	1671	1780	2520.5	1741	1995.4	2015.1	6149.4	5487.8	2960.8	2561.8	1558	1793	1811	1559	2690.2
MFI																							
%CV	38%	43%	43%	54%	51%	56%	44%	51%	42%	52%	47%	49%	51%	57%	38%	41%	51%	51%	49%	56%	58%	49%	55%

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 16b. Individual laboratory results for Serum #195 - class I by Immucor

**** Serum 195 ****																							
Ctr	A2	A29	B13	B18	B35	B38	B44	B49	B51	B52	B53	B54	B55	B56	B57	B58	B59	B63	B67	B71	B72	B77	B27
3808	4309	584	935	998	684	917	1031	1219	822	877	1258	1001	799	647	5505	4867	1506	1344	531	725	698	1131	1288
8029	7855	1305	1812	2012	1769	1971	2421	2523	1756	1599	2366	1999	1737	1762	8728	6476	2623	2894	1771	1656	1559	2086	2621
Avg	6082	945	1374	1505	1227	1444	1726	1871	1289	1238	1812	1500	1268	1205	7117	5672	2065	2119	1151	1191	1129	1609	1955
Std																							
Dev.S	2507	510	620	717	767	745	983	922	660	511	783	706	663	788	2279	1138	790	1096	877	658	609	675	943
MFI																							
%CV	41%	54%	45%	48%	63%	52%	57%	49%	51%	41%	43%	47%	52%	65%	32%	20%	38%	52%	76%	55%	54%	42%	48%

Table 16a. Individual laboratory results for Serum #195 - class I by One Lambda Single Antigen, cont.

	**** Serum 195 ****															
Ctr	B37	B45	B46	B47	B62	B64	B75	B76	B78	B65	B82	B39	B50	Bw4	Other	
230	4218	3303	4762	4394	4126	3279	3153	2427	2575	2751	2036	2289	2083	12929	B48	One Lambda
615	2728	1819	2724	2538	2573	1773	1878	1448	1491	1496	1196	1307	1291			One Lambda
792	1984	1528	2106	1912												One Lambda
2400	3727	2657	4059	3232	3341	2335	2402		2252							One Lambda
3224	3148	1961	3022	2791	3287	2281	2236	1121	1859	1779	1205	1847	1513	15607	A*30:01	One Lambda
3632	2282	1899	2790	1738	2631	1815	2175	1850		1538		2395			B2708,B2705,B48	One Lambda
3753	1905	1808	2990	2561	2898	1869	1818							17341		One Lambda
5130			2485		2547											One Lambda
5214	9000	7000	10000	8000	10000	7000	7000	5000	6000	6000	4000	6000	5000	8000		One Lambda
8001	2667	2113	3334	2959	2934	2074	2248	1455	1658	1747	1197	1324	1360			One Lambda
8083	4476	2870	4471	3726	4028	2873	3203	2397	2491	2363	1966	2242	2032	19403		One Lambda
8103	1956	1640	2668	2839	2469	2006	1625	1707	1494	1680	1407	1435	1555		B2708,B7801,B8201,B3901 >	
8111	3300	2200	3300	2700	3000	2200	2000	1900	1800	2000	1600	1700	1500	4000		One Lambda
14262	2324	1579	2389	1783	2264	1689	1450	1312	1339	1468	1097	1453	1111			One Lambda
Avg	3363	2491	3650	3167	3546	2600	2599	2062	2296	2282	1745	2199	1938	12880		
Std																
Dev.S	1895	1456	1987.4	1633	2020.9	1462	1485	1119	1370	1369	913	1397	1192	5874.7		
MFI																
%CV	56%	58%	54%	52%	57%	56%	57%	54%	60%	60%	52%	64%	61%	46%		

Table 16b. Individual laboratory results for Serum #195 - class I by Immucor, cont.

	**** Serum 195 ****															
Ctr	B37	B45	B46	B47	B62	B64	B75	B76	B78	B65	B82	B39	B50	Bw4	Other	
3808	672	549	581	1076	854	829	562	439	539	604	913		476		B2708,B3901,B2705,A203	Immucor
8029	1598	1316		1984	1887	1736	1354	1290	1382		1720			8728	B2708,B3901,Bw6,A203	Immucor
Avg	1135	933	-	1530	1371	1283	958	865	961	-	1317	-	-	-		
Std																
Dev.S	655	542	-	642	730	641	560	602	596	-	571	-	-	-		
MFI																
%CV	58%	58%	-	42%	53%	50%	58%	70%	62%	-	43%	-	-	-		

Table 17a. Individual laboratory results for Serum #196 - class I by One Lambda Single Antigen

**** Serum 196 ****																						
Ctr	B13	B35	B46	B49	B50	B51	B52	B53	B56	B57	B58	B62	B63	B71	B72	B75	B76	B77	B78	Cw10	Cw9	B55
230	5131	13751	12901	17717	15175	10391	12264	11688	18726	15515	9080	18354	16026	19113	19971	15662	13021	13138	9811	9128	9985	4845
615	10195	18338	17574	21351	18753	17229	15606	16732	22772	20610	13386	24137	20065	22686	23006	22273	16963	17800	13800	14023	13993	8949
792	4221	11473	11007	15706	13225	11244	10303	9896	15785	13025	7340	18663	14115	16002	16749	15420	9460	11427	7713	7148	7488	4474
2400	2409	7855	7380	10968	9436	5486	7204	6476	11259	8760	5192	14283	10501	11890	12035	8944	6158	7827	4633	4705	4608	3116
3224	5602	14142	12850	18745	14982	13229	12156	12570	19068	15700	9268	21399	16995	18886	19589	18639	10974	13573	9690	9230	9852	5993
3632	2774	8759	8258	11518	9016	8260	7591	7077	12966	10397	4500	15353	11820	14215	12392	12256	6768	8089	5356	5240	5807	3137
3753	4194	11294	11649	15953	13244	8613	10267	10193	17471	13065	7551	20594	15425	17473	18254	14433	10649	11273	7955	7776	8489	4226
5130	4727	12319	10776	13618	11121	10604	9700	10495	14667	13579	7473	18410	13117	15882	16893	14994	10862	10590	7855	7983	8762	5127
5214	10000	30000	25000	30000	30000	20000	20000	20000	30000	30000	20000	40000	30000	30000	35000	30000	20000	20000	20000	20000	20000	13000
8001	5688	13868	13158	17374	15306	13163	11811	12261	18071	16014	9043	20957	16823	18277	18458	17607	11684	13588	9353	9071	9705	5096
8083	5853	14448	13787	19028	15599	13593	12548	12877	19563	17047	9811	22899	17513	20193	19961	19368	12224	14514	9742	9847	10129	5702
8103	3277	8169	7602	10903	9296	8059	8081	7273	11234	9844	6164	12674	10244	11756	11833	10872	7408	8734	5938	5116	5258	3662
8111	4000	12000	11000	16000	14000	8800	11000	10600	16500	13000	8000	19000	15000	17000	17000	14000	10000	12000	8000	7600	8000	4800
14262	4361	12145	11003	15704	13165	8920	11122	11204	16590	13838	8400	18145	14481	17274	17159	13930	10352	12135	8436	7465	8229	5542
Avg	5174	13469	12425	16756	14451	11257	11404	11382	17477	15028	8943	20348	15866	17903	18450	16314	11180	12478	9163	8881	9308	5548
Std																						
Dev.S	2329	5508	4497	4926	5265	3895	3319	3637	4837	5293	3846	6484	4904	4588	5760	5242	3725	3434	3849	3969	3881	2586
MFI																						
%CV	45%	41%	36%	29%	36%	35%	29%	32%	28%	35%	43%	32%	31%	26%	31%	32%	33%	28%	42%	45%	42%	47%

Table 17b. Individual laboratory results for Serum #196 - class I by Immucor

**** Serum 196 ****																						
Ctr	B13	B35	B46	B49	B50	B51	B52	B53	B56	B57	B58	B62	B63	B71	B72	B75	B76	B77	B78	Cw10	Cw9	B55
3808	1205	3875	2919	6704	6137	2130	4371	4093	5764	4700	2844	8793	6622	6525	7097	5763	3937	6477	3023	1630	1651	
8029	1726	6166	3776	8921	7900	2985	5295	5774	8253	7075	3762	11115	9308	8988	8694	8082	5581	8097	4269	2556	2548	1387
Avg	1466	5021	3348	7813	7019	2558	4833	4934	7009	5888	3303	9954	7965	7757	7896	6923	4759	7287	3646	2093	2100	-
Std																						
Dev.S	368	1620	606	1568	1247	605	653	1189	1760	1679	649	1642	1899	1742	1129	1640	1162	1146	881	655	634	-
MFI																						
%CV	25%	32%	18%	20%	18%	24%	14%	24%	25%	29%	20%	16%	24%	22%	14%	24%	24%	16%	24%	31%	30%	-

Table 17a. Individual laboratory results for Serum #196 - class I by One Lambda Single Antigen, cont.

**** Serum 196 ****							
Ctr	B44	B45	B37	B64	B18	Other	
230	2703	3546				B4005,B48	One Lambda
615	5466	5071	2260	2694	2634	Cw18,B82,B54,A26 >	One Lambda
792	2375	2375					One Lambda
2400							One Lambda
3224	2989	2695	1640	1320	1186	B54,B65,B42,B59	One Lambda
3632						B4005,B48	One Lambda
3753	2414	2278					One Lambda
5130	2613	2354					One Lambda
5214	9000	8000	4000	4000	3000	B82,B54,B65,B42 >	One Lambda
8001	2995	2890	1105	1225	1120		One Lambda
8083	2998	2864					One Lambda
8103	2052	1917	1426	862		B7801,A69,B14,B42 >	
8111	2200	2500	1600	1100	1100	B42	One Lambda
14262	2482	2716	2078	1308	1255	B54,B65,B42,B59	One Lambda
Avg	3357	3267	2016	1787	1716		
Std							
Dev.S	1985	1697	956.7	1141	862.5		
MFI							
%CV	59%	52%	47%	64%	50%		

Table 17b. Individual laboratory results for Serum #196 - class I by Immucor, cont.

**** Serum 196 ****							
Ctr	B44	B45	B37	B64	B18	Other	
3808						B82	Immucor
8029	1363	805	539	639	506	B82,B54,Bw4,Bw6	Immucor
Avg	-	-	-	-	-		
Std							
Dev.S	-	-	-	-	-		
MFI							
%CV	-	-	-	-	-		

Table 18a. Individual laboratory results for Serum #197 - class I by One Lambda Single Antigen

**** Serum 197 ****																								
Ctr	A1	A11	A2	A29	A3	A31	A33	A34	A36	A66	A68	A69	A74	A80	B44	B45	B76	A26	A43	B56	B49	B62	A30	B67
230	4180	5270	16087	5714	8110	7289	7340	6740	3804	7136	7783	15163	8552	5001	3738	4145	4993	4966	3548	2410	2536	2448	4244	
615	6301	9648	18865	7096	9595	9769	9679	8954	4921	9689	10565	16369	11001	6323	4783	4521	6891	4611	4312	3022	3413	3198	6149	2320
792	3569	5069	15050	3657	5014	5028	5091	4694	2781	4649	5656	11962	5701	3241	2959	2892	4275	2368	2428	1989	1835	1786	2899	
2400	3833	4735	16071	4356	5055	5643	5079	4997	2957	5003	5236	15315	5717	3976	3402	3472	5431	2900	3189	2301	2133		3102	
3224	3381	5103	14185	3148	5027	4603	4672	4317	2242	4890	5154	11523	5261	1999	2014	1956	2384	2019	1896	1720	1575	1417		
3632	3340	4997	14348	4131	4744	4523	4685	4564	2771	4875	5478	11137	5320	3214	2326	2134	3532	4515	2395	2060				
3753	4197	4752	19009	4657	7169	7457	6930	6451	3051	7093	7297	15940	8392	4660	3470	3797	5190	2918	2631	2098	2504	2463	4670	1624
5130	4449	6728	16991	5511	6803	6798	6667	6006	3452	6980	7010	15562	7821	4213	3600	3630	5574	3245	3074	2611	2220	2416		
5214	10000	10000	30000	10000	15000	14000	12000	13000	6000	15000	15000	25000	16000	9000	6000	7000	9000	6000	5000	4000	4000	5000	8000	2500
8001	4982	7476	16893	5532	7608	7204	7448	6867	3900	7309	8027	14730	8089	4723	3356	3311	4780	3584	3484	2122	2363	2152	4380	1564
8083	5260	7167	19814	5658	7433	7293	7350	6583	3758	7412	7923	17875	8392	4731	4029	3849	6009	3572	3463	2933	2766	2464	3907	2319
8103	3222	4212	12042	3425	4350	4368	4393	3969	2381	3883	4949	8504	4294	2844	2708	2666	4298	2074	1986	1922	1904	1916	2977	1475
8111	4000	3500	15000	4200	5500	5500	5000	4900	2900	5200	5500	13000	6000	3700	3000	3300	4700	2700	2700	2400	2200	2000		1900
14262	2469	2675	12769	2967	3981	4006	3914	3743	1863	4003	4092	9975	4577	2852	2713	2792	4741	1719	1686	2361	1632	1381	2409	1532
Avg	4513	5809	16937	5004	6814	6677	6446	6128	3342	6652	7119	14433	7508	4320	3436	3533	5128	3371	2985	2425	2391	2387	4274	1904
Std																								
Dev.S	1848	2144	4397	1853	2872	2652	2268	2440	1097	2912	2838	4064	3100	1742	1022	1235	1548	1257	936	583	691	965	1704	417
MFI																								
%CV	41%	37%	26%	37%	42%	40%	35%	40%	33%	44%	40%	28%	41%	40%	30%	35%	30%	37%	31%	24%	29%	40%	40%	22%

Table 18b. Individual laboratory results for Serum #197 - class I by Immucor

**** Serum 197 ****																								
Ctr	A1	A11	A2	A29	A3	A31	A33	A34	A36	A66	A68	A69	A74	A80	B44	B45	B76	A26	A43	B56	B49	B62	A30	B67
3808	776	2158	8795	1088	1984	1665	1754	1860	916	2013	2185	6784	1671	936	1575	1403	1610						1294	
8029	1966	4427	13560	3243	4969	3865	4730	4197	2279	4598	5113	12452	4636	2565	3763	2819	3779	2088	1825	1509	1838	1995	3089	1190
Avg	1371	3293	11178	2166	3477	2765	3242	3029	1598	3306	3649	9618	3154	1751	2669	2111	2695	-	-	-	-	-	-	-
Std																								
Dev.S	841	1604	3369	1524	2111	1556	2104	1653	964	1828	2070	4008	2097	1152	1547	1001	1534	-	-	-	-	-	-	-
MFI																								
%CV	61%	49%	30%	70%	61%	56%	65%	55%	60%	55%	57%	42%	66%	66%	58%	47%	57%	-	-	-	-	-	-	-

Table 18a. Individual laboratory results for Serum #197 - class I by One Lambda Single Antigen, cont.

**** Serum 197 ****					
Ctr	B55	Cw9	B50	Other	
230					One Lambda
615	2027	2894	2132	B82,B57,B58,B41 >	One Lambda
792		1571			One Lambda
2400		2171		Cw17	One Lambda
3224	1023				One Lambda
3632					One Lambda
3753	1198		1366	B57,A*30:01	One Lambda
5130		2315			One Lambda
5214	3000	3000	3000	B41,B71,B72,A30:01,B42,B57,C17	One Lambda
8001	1381	1999	1430	B57,B72,Cw17	One Lambda
8083					One Lambda
8103	1338	1638	1171	A1101,A1102,A6601,A6602 >	
8111	1600	1800	1400	B57,B41,B42,B71 >	One Lambda
14262	1345			Cw8,Cw17	One Lambda
Avg	1614	2174	1750		
Std Dev.S	634	540	695		
MFI					
%CV	39%	25%	40%		

Table 18b. Individual laboratory results for Serum #197 - class I by Immucor, cont.

**** Serum 197 ****					
Ctr	B55	Cw9	B50	Other	
3808				A6601,A6602,A203	Immucor
8029			1270	B82,Bw4,Bw6,A203	Immucor
Avg	-	-	-		
Std Dev.S	-	-	-		
MFI	-	-	-		
%CV	-	-	-		

Table 19a. Individual laboratory results for Serum #198 - class I by One Lambda Single Antigen

**** Serum 198 ****																
Ctr	A1	A11	A26	A29	A3	A36	A43	A80	A24	A25	A66	B63	A34	B78	A6601	Other
230	13572	12576	5168	11745	11145	13708	8686	11516	1900	2361	3753	2042	2324			One Lambda
615	20371	15107	7783	12107	9742	15910	8951	11817	2670	3174	4277	4180	2682	548		Cw15,A30,A33,A74 >
792	19317	13324	5745	8483	8826	14041	6301	10314	1563	1887	2903	2455	1709			One Lambda
2400	18967	12985	6831	9209	9498	14604	7596	11340			3201	3125				One Lambda
3224	19110	11991	5417	7541	8182	13111	5650	8410	1175	1506	2164	1445	1334	1117		One Lambda
3632	18887	13763	6047	7511	9750	15022	6540	11774	2013		2729					B7
3753	26145	13029	5546	10020	8567	17957	7020	9855	1417	2584	3254	2201	1852			One Lambda
5130	19352	14951	7117	10357	10224	15374	7737	12742		2272		2453				One Lambda
5214	30000	20000	10000	20000	20000	20000	10000	20000	3000	4000		5000	4000		7000	A*66:02
8001	20930	14328	7107	10490	9510	15685	7673	11077	1721	2430	3566	3020	2281			A30
8083	21284	17477	8726	11884	13058	17499	9422	14707	2435	2706	4097	3310	2243			One Lambda
8103	18210	13588	7344	9150	9755	16037	7202	12176	2090	3339	4396	3809	2649	2291	4396	B7801,A1101,A1102,A6602 >
8111	20000	13000	6500	9000	9000	14000	7000	11000	1600	2000		3000	1800	1100	3000	One Lambda
14262	15494	10575	5116	6908	7541	12313	5245	9631	1101	1543	2314	1237	1079	1338		One Lambda
Avg	20117	14050	6746	10315	10343	15376	7502	11883	1890	2484	3332	2867	2178	1279	4798.7	
Std																
Dev.S	4010	2349	1418	3240	3083	2058	1386	2777	585	742	762	1065	789	636	2030.2	
MFI																
%CV	20%	17%	21%	31%	30%	13%	18%	23%	31%	30%	23%	37%	36%	50%	42%	

Table 19b. Individual laboratory results for Serum #198 - class I by Immucor

**** Serum 198 ****																
Ctr	A1	A11	A26	A29	A3	A36	A43	A80	A24	A25	A66	B63	A34	B78	A6601	Other
3808	6613	2899	1207	1824	2646	4823	1151	1863		792	669				669	Immucor
8029	10695	8164	3780	5187	6986	8643	3457	6500	2661		2315					Bw4,A2403
Avg	8654	5532	2494	3506	4816	6733	2304	4182	-	-	-	-	-	-	-	
Std																
Dev.S	2886	3723	1819	2378	3069	2701	1631	3279	-	-	-	-	-	-	-	
MFI																
%CV	33%	67%	73%	68%	64%	40%	71%	78%	-	-	-	-	-	-	-	

Table 20a. Individual laboratory results for Serum #195 - class II by One Lambda Single Antigen

**** Serum 195 ****											
Ctr	DR1	DR10	DR103	DR15	DR16	DR51	DR53	DR7	DR9	DR4	Other
230	24783	15947	26212	28709	28411	23138	16186	21328	20374		One Lambda
615	16996	7276	17432	19580	18545	16683	10155	13142	11870	734	DQA1*05,DQA1*05:01/DQB1*02:01
792	19220	8709	19561	23113	23485	20439	8922	14181	13048		One Lambda
2400	21402	9886	23862	24748	24123	19322	12109	17652	14601		DQ2
3224	22728	9368	22809	25897	24181	21102	11477	16822	14520	811	One Lambda
3632	21116	6470	22149	26079	24187	22452	9703	16517	12037		DQA1*05:01:/DQB1*02:01
3753	21177	11424	22309	29532	29582	18972	10545	17012	14656		One Lambda
5130	20033	8784	21311	22837	21957	20347	11121	14848	13893		One Lambda
5214	45000	20000	50000	50000	50000	40000	20000	35000	30000	3000	One Lambda
8001	20780	8433	21703	25868	24164	21222	10588	15827	14141		One Lambda
8083	24253	10761	25236	28627	29509	25786	12387	19562	16298		One Lambda
8103	16064	7497	16064	18156	17593	16418	9229	13054	11770	1296	DQA1*05,DQA1*06
8111	20000	9000	21000	23000	23000	18000	11000	16000	13000		One Lambda
14262	18563	6003	20213	21863	21328	16172	8728	13801	11141		DQA1*05
Avg	22294	9968	23562	26286	25719	21432	11582	17482	15096	1460	
Std Dev.S	6973	3794	8082	7597	7840	5998	3063	5563	4880	1056	
MFI %CV	31%	38%	34%	29%	30%	28%	26%	32%	32%	72%	

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 20b. Individual laboratory results for Serum #195 - class II by Immucor

**** Serum 195 ****											
Ctr	DR1	DR10	DR103	DR15	DR16	DR51	DR53	DR7	DR9	DR4	Other
3808	14428	3705	16022	19415	19191	13674	4147	13621	7311		Immucor
8029	16560	5237	18931	18726	16911	14864	7588	14369	10049	1873	DR12
Avg	15494	4471	17477	19071	18051	14269	5868	13995	8680	-	
Std Dev.S	1508	1083	2057	487	1612	841	2433	529	1936	-	

Table 21a. Individual laboratory results for Serum #196 - class II by One Lambda Single Antigen

**** Serum 196 ****																		
Ctr	DQ6	DQ8	DQ9	DR10	DR4	DR53	DR7	DR9	DR1	DQ4	DQA1*02	DQA1*03	DR14	DQA1*06	DQA1*04	DQ2	Other	
230	9630	17269	18116	19380	20194	19075	8519	16200	6577	11811	11408	17792	14943	11378	5636	9060	DQ7	One Lambda
615	10258	24542	24243	14903	23269	25787	4549	11566	4883		17488	24542	11183	4204	2265		DRB1*14:01,DRB1*14:54, DRB5*01:01,DR51	One Lambda
792	6858	23717	22330	15061	23085	23949	4708	12029	4973	19981			10863			15881	DQ7	One Lambda
2400	5614	18451	20638	12986	21718	24444	5311	10690	4718	9649	7986	20636	10852	9450	2930			One Lambda
3224	9389	26300	26285	15607	25588	26871	5736	13983	6374	24787	18061	26300			4304		DRB1*14:01,DRB1*14:54	One Lambda
3632	6575	24215	23910	11821	23238	25075	3343	10130	4859	20996	13917	24215		3404			DR1404,DRB1*14:01,DRB1*14:54, DRB1*14:05	One Lambda
3753	5854	20381	21282	17244	25359	31105	3573	10336	2613	8163	4190	17426	11117				DRB1*14:01	One Lambda
5130	8405	17576	19974	13828	20372	22028	5217	12333	5250	18220							DRB1*14:54,DRB1*14:01,DQA1*03:01, DQA1*03:03,DQA1*03:02,DQA1*06:01, DQA1*01:03,DQA1*02:01,DQA1*04:01	One Lambda
5214	20000	30000	30000	30000	40000	50000	9000	20000	10000	30000	30000	30000	20000	8000			DRB1*14:01,DRB1*14:54,DRB5*01,DR51	One Lambda
8001	9020	26481	25984	14650	25346	27411	3719	10997	4967	23595	17005	18375	11600	3426		3527	DR51,DRB5*01:01,DRB1*14:01, DRB1*14:54,DQA1*02:01, DQA1*06:01 ,DQB1*02:02, DQA1*03:01	One Lambda
8083	10618	27863	28186	20643	28716	30085	6243	15416	6911	26117	19166	28186	14126				DQ7	One Lambda
8103	9747	19562	20041	13384	18485	18707	5972	12317	6028	18683	13875	20041	12181	9680	2930	6067	DQ3	One Lambda
8111	6300	19000	21000	14000	21000	25000	5600	11000	5000	9600	7000	15000	10000	9000	3000			One Lambda
14262	3422	16086	17993	11325	18271	24033	3082	7605	3149	7233	6010	18024	8338	3503			DR51	One Lambda
Avg	8692	22246	22856	16059	23903	26684	5327	12472	5450	17603	13842	21711	12291	6894	3511	8634		
Std Dev.S	3879	4451	3695	4792	5487	7566	1772	3086	1766	7582	7211	4800	3129	3221	1236	5335		
MFI																		
%CV	45%	20%	16%	30%	23%	28%	33%	25%	32%	43%	52%	22%	25%	47%	35%	62%		

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 21b. Individual laboratory results for Serum #195 - class II by Immucor

**** Serum 196 ****																		
Ctr	DQ6	DQ8	DQ9	DR10	DR4	DR53	DR7	DR9	DR1	DQ4	DQA1*02	DQA1*03	DR14	DQA1*06	DQA1*04	DQ2	Other	
3808	1596	10026	9999	3900	17699	13282	3047	4461			4935	10026	3605					Immucor
8029	3021	12894	13596	6276	19368	15445	5756	7738	2233	8123			6116			6435	DR1404,DQ7	Immucor
Avg	2309	11460	11798	5088	18534	14364	4402	6100	-	-	-	-	4861	-	-	-		
Std Dev.S	1008	2028	2543	1680	1180	1529	1916	2317	-	-	-	-	1776	-	-	-		

Table 22a. Individual laboratory results for Serum #197 - class II by One Lambda Single Antigen

**** Serum 197 ****											
Ctr	DR1	DR17	DR18	DR4	DR10	DR52	DR14	DR103	DQ5	DQA1*03	Other
230	18437	3284	4342	5673	4453	4836	13080				One Lambda
615	16145	2870	2278	9103	2123	2501	11933	1250	1962	1548	DRB1*14:02,DRB3*02:02,DRB3*01:01
792	11366		2456	4939	2191	2344	9532				One Lambda
2400	19780	7405	6485	12013	6658	6417	17834	4047	2483	2594	DPw1,DP11
3224	12472	1957	1465		1772			733			DRB1*04:01,DRB1*04:03, DRB1*04:04,DRB1*04:05, DRB1*14:02,DRB3*02:02
3632	11266	1953	1711	6828							DRB1*14:02,DRB1*14:06,DRBB3*02
3753	16852	1696	2096	6068	1728	2997	13153		1259		DRB1*04:01 ,DRB1*04:03,DRB1*04:04 ,DRB1*04:05,DRB1*14:02,DRB3*02, DQB*05:01
5130	12377										DRB1*14:02,DRB1*04:01, DRB1*04:04,DRB1*04:05
5214	25000	4000	3000	10000	3000	2000	17000				DR14:02,DRB3*02,DR103
8001	14221	2679	2184	8149	2129	2286	10834	1173	1470	1334	DRB1*04:01 DRB1*04:03 DRB1*04:04 DRB1*04:05 DRB1*14:02 DRB3*02:02 DQA1*03:03 DQB1*05:01 DQA1*03:01
8083	17673	2805	3765	10432	4028	3774	14024				One Lambda
8103	9787	1748	6262	2360	2410	8319	1090	1373	1199		DR3
8111	11700	2100	1800	4000	2100			1200		1000	One Lambda
14262	11211	2088	1971	4932	2141	1811	9099				DQ4,DP11,DPB1*11:01(DP11), DRB1*14:02(DR14), DRB3:02:02(DR52)
Avg	14878	2882	2796	7367	2890	3138	12481	1582	1709	1535	
Std											
Dev.S	4295	1583	1441	2536	1467	1468	3210	1222	509	625	
MFI											
%CV	29%	55%	52%	34%	51%	47%	26%	77%	30%	41%	

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 22b. Individual laboratory results for Serum #197 - class II by Immucor

**** Serum 197 ****											
Ctr	DR1	DR17	DR18	DR4	DR10	DR52	DR14	DR103	DQ5	DQA1*03	Other
3808	4832	780	885	2502							Immucor
8029	9860	2443	2477	5980	1471	2044		1411			DQ4,DQ7,DQ8,DQ9
Avg	7346	1612	1681	4241	-	-	-	-	-	-	
Std											
Dev.S	3555	1176	1126	2459	-	-	-	-	-	-	

Table 23a. Individual laboratory results for Serum #198 - class II by One Lambda Single Antigen

**** Serum 198 ****								
Ctr	DQ4	DQ5	DQ6	DQ9	DQ8	DQA1*01	Other	
230	9226	17161	17160	2194	2527	16866		One Lambda
615	8634	20667	25387	2242	2398		DR1,DR4,DR52,DRB3*03:01,DRB1*04:03, DRB1*04:04,DRB1*04:01,DRB1*01:02	One Lambda
792	6558	16029	23460					One Lambda
2400	11391	22465	24591	4230	2790		DR1,DR4,DR52,DP15,	One Lambda
3224	6965	19424	26953	1202	1366	26953	DRB3*03:01	One Lambda
3632	7950	19606	28123				DRB3*03:01	One Lambda
3753	6866	21026	24061	1774	1677			One Lambda
5130	9026	20402	24143				DQA1*01:03,DQA1*01:01, DQA1*01:02,DQA1*03:03	One Lambda
5214	10000	30000	35000	3000	4000			One Lambda
8001	8300	20393	27400	2013	2228		DR52	One Lambda
8083	10778	23458	27030			27030		One Lambda
8103	6876	16906	22920	2639	2676	22920	DQ3,DQA1*03	
8111	6000	18000	20000	1800				One Lambda
14262	5423	16257	18174					One Lambda
Avg	8142	20128	24600	2344	2458	23442		
Std Dev.S	1804	3632	4497	876	793	4786		
MFI								
%CV	22%	18%	18%	37%	32%	20%		

Blue = DSA against cell #193 only
 Gold = DSA against cell #194 only
 Green = DSA against cell #193 and #194

Table 23b. Individual laboratory results for Serum #198 - class II by Immucor

**** Serum 198 ****								
Ctr	DQ4	DQ5	DQ6	DQ9	DQ8	DQA1*01	Other	
3808	2044	7869	11877			11877		Immucor
8029	5111	13035	15909	2017	1641			Immucor
Avg	3578	10452	13893	-	-	-		
Std Dev.S	2169	3653	2851	-	-	-		

Paper Challenge

Table 24. Individual Virtual crossmatch results for Serum #197 vs Donor# V1

Donor #V1 HLA A*01:01:01-A*02:01:01-B*13:02:01-B*52:01:01-C*06:02:01-C*12:02:02/DRB1*07:01:01-DRB1*15:02:01G-DRB4*01:03:01-DRB5*01:02:01-DQA1*01:03:01-DQA1*02:01:01-DQB1*02:01:01G-DQB1*06:01-DPA1*01:03:01-DPA1*02:01:01-DPB1*04:01:01G-DPB1*17:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	197	60%	Positive	A1 (5592) A2 (17281)	Positive	No Class II DSA	Positive due to class I DSA
792	197	99.73	Positive	A1 (3569) A2 (14451)	Positive	No Class II DSA	
1461	197	33	Positive	A1 (961) A2 (8026)	Positive	No Class II DSA	
2400	197	100	Positive	A1 (3748) A2 (15143)	Positive	No Class II DSA	
3632	197	99	Positive	A1 (3340) A2 (13469)	Positive	No Class II DSA	No Class II DSA, but B cell FXM is predicted to be positive due to Class I DSAs. Do not recommend moving forward .
3753	197	99	Positive	A1 (4197) A2 (19009)	Positive	No Class II DSA	
3808	197		Positive	A1 (776) A2 (8393)	Positive	No Class II DSA	Unacceptable; Due to Class I DSA present
3966	197	99%	Positive	A1 (4639) A2 (18042)	Positive	No Class II DSA	Unacceptable
5130	197	98880%	Positive	A1 (4449)	Positive	No Class II DSA	Positive due to Class I DSAs
8001	197	100	Positive	A1 (4982) A2 (16663)	Positive	No Class II DSA	DSA to C*12:02:02 could not be ruled out as it is not represented on our LSAB panel. DSA to DRB5*01:02:01 could not be ruled out as it is not represented on our LSAB panel.
8029	197	36	Positive	A1 (1966) A2 (12315)	Positive	No Class II DSA	DRB4*01:03:01 and DRB5*01:02:01 are not covered in lifecodes Class II beads
8080	197	100	Positive	A1 (5867) A2 (17542)	Positive	No Class II DSA	Patient has Class I DSA
8083	197	97.32	Positive	A1 (5260) A2 (18381)	Positive	No Class II DSA	Due to Class I antibodies.
8103	197	41	Positive	A1 (3222) A2 (10725)	Negative	No Class II DSA	
8110	197	100%	Positive	A1 (4867) A2 (17956)	Positive	No Class II DSA	Positive due to Class I
14262	197	99	Positive	A1 (2469) A2 (12975)	Positive	No Class II DSA	

Table 25. Individual Virtual crossmatch results for Serum #197 vs Donor# V2

Donor #V2 HLA A*03:01:01-A*23:01:01-B*49:01:01-B*53:01:01-C*04:01:01-C*07:01:02/DRB1*11:01:02-DRB1*16:02:01G-DRB3*02:02:01-DRB5*02:02:01-DQA1*01:02:01-DQA1*01:02:02-DQB1*05:02:01G-DQB1*06:02:01G-DPA1*01:03-DPA1*03:01-DPB1*04:01:01G-DPB1*105:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	197	52	Positive	A3 (7555) B49 (2537)	Positive	DR52 (4658)	
792	197	99.73	Positive	A3 (5014) B49 (1835)	Positive	DR52 (2344)	
1461	197	33	Positive	A3 (1947) B49 (778)	Positive	DR52 (748)	
2400	197	100	Positive	A3 (4993) B49 (2028)	Positive	DQ5 (1261) DR52 (6045)	
3632	197	98	Positive	A3 (4744)	Positive	DR52 (1619)	Weak DSA to DR52. B cell FXM is predicted to be positive mostly due to Class I DSA to A3
3753	197	99	Positive	A3 (7169) B49 (2504)	Positive		DSA to DRB3*02 (MFI=2997)
3808	197		Positive	A3 (1984)	Positive	No Class II DSA	Unacceptable; No Class II DSA but is expected to be positive due to Class I DSA present
3966	197	99%	Positive	A3 (6542) B49 (2435)	Positive	DR52 (2188)	Unacceptable; DR52 (DRB3*02:02)
5130	197	98.88%	Positive	A3 (6803)	Positive	DR52 (1435)	
8001	197	100	Positive	A3 (7608) B49 (2363)	Positive	DR52 (2286)	DSA to C*07:01:02 could not be ruled out as it is not represented on our LSAB panel. DSA to DPB1*105:01 could not be ruled out as it is not represented on our LSAB panel; DR52 allele detected:DRB3*02:02
8029	197	36	Positive	A3 (4969) B49 (1838)	Positive	DR52 (2044)	DPB1*105:01:01 is not covered in lifecodes Class II beads
8080	197	100	Positive	A3 (8273) B49 (2602)	Positive	DR52 (2486)	
8083	197	97.32	Positive	A3 (7433) B49 (2766)	Positive	DR52 (3774)	DSA to class I antibodies
8103	197	41	Borderline	A3 (4350)	Borderline	DR52 (2410)	low ab MFI; low ab MFI
8110	197	100%	Positive	A3 (7378) B49 (2664)	Positive	No Class II DSA	Positive due to Class I
14262	197	99	Positive	A3 (3981) B49 (1632)	Positive	DR52 (1811)	

Table 26. Individual Virtual crossmatch results for Serum #197 vs Donor# V3

Donor #V3 HLA A*02:06:01-B*15:02:01-B*44:03:02-C*07:06:01-C*08:01:01/DRB1*07:01:01G-DRB1*12:02:01-DRB3*03:01:03-DRB4*01:01:01G-DQA1*02:01:01-DQA1*06:01:01-DQB1*02:01:01G-DQB1*03:01:01G-DPA1*02:02:02-DPB1*05:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	197	48	Positive	A2 (17870) B44 (3892)	Positive	DR52 (3239)	Weak Class II dsa, but also Class I dsa
792	197	99.73	Positive	A2 (14759) B44 (2959)	Positive	No Class II DSA	No Class II DSA present
1461	197	33	Positive	A2 (8738) B44 (1732)	Positive	No Class II DSA	
2400	197	100	Positive	A2 (16376) B44 (3553)	Positive	No Class II DSA	No Class II DSA
3632	197	99	Positive	A2 (14348) B44 (2326)	Positive	No Class II DSA	No Class II DSA, but B cell FXM is predicted to be positive due to Class I DSAs. Do not recommend moving forward
3753	197	99	Positive	A2 (19009) B44 (3470)	Positive	No Class II DSA	No Class II DSA
3808	197		Positive	A2 (8795) B44 (1575)	Positive	No Class II DSA	Unacceptable; No Class II DSA but is expected to be positive due to Class I DSA present
3966	197	99%	Positive	A2 (18042) B44 (4489)	Positive	No Class II DSA	Unacceptable; No DSA class II
5130	197	98.88%	Positive	A2 (16777) B44 (3600)	Positive	DPA1*02 (992)	
8001	197	100	Positive	A2 (16705) B44 (3356)	Positive	No Class II DSA	DSA to C*07:06 could not be ruled out as it is not represented on our LSAB panel
8029	197	36	Positive	A203 (14113) B44 (3763)	Positive	DQ7 (1027)	A*02:06:01 and C*07:06:01 are not covered in lifecodes Class I beads, but A*02:06 shares same epitope (79GT) with A*02:03 hence it could be donor specific.
8080	197	100	Positive	A2 (37762) B44 (4456)	Positive	No Class II DSA	Patient has Class I DSA
8083	197	97.32	Positive	A2 (19330) B44 (4029)	Positive	No Class II DSA	DSA to class I antibodies
8103	197	41	Positive	A2 (10388)	Negative	No Class II DSA	high MFI
8110	197	100%	Positive	A2 (17956) B44 (2379)	Positive	No Class II DSA	Positive due to Class I
14262	197	99	Positive	A2 (12829) B44 (2948)	Positive	No Class II DSA	

Table 27. Individual Virtual crossmatch results for Serum #198 vs Donor# V1

Donor #V1 HLA A*01:01:01-A*02:01:01-B*13:02:01-B*52:01:01-C*06:02:01-C*12:02:02/DRB1*07:01:01-DRB1*15:02:01G-DRB4*01:03:01-DRB5*01:02:01-DQA1*01:03:01-DQA1*02:01:01-DQB1*02:01:01G-DQB1*06:01-DPA1*01:03:01-DPA1*02:01:01-DPB1*04:01:01G-DPB1*17:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	198	48	Positive	A1 (12963)	Positive	DQ6 (16534) DQA1*01 (15738)	
792	198	88.57	Positive	A1 (19317)	Positive	DQ6 (22252)	
1461	198	16	Positive	A1 (6961)	Positive	DQ6 (4670) DQA1*01 (9764)	
2400	198	99	Positive	A1 (18898)	Positive	DQ6 (30644)	
3632	198	92	Positive	A1 (18887)	Positive	DQ6 (25062)	
3753	198	96	Positive	A1 (26145)	Positive	DQ6 (24061)	
3808	198		Positive	A1 (6613)	Positive	DQ6 (5716) DQA1*01 (9802)	Unacceptable
3966	198	96%	Positive	A1 (17972)	-		Unacceptable
5130	198	95210%	Positive	A1 (19352)	Positive	DQ6 (23344) DQA1*01 (24143) DQA1*02 (6832)	
8001	198	96	Positive	A1 (20930)	Positive	DQ6 (26048)	DSA to C*12:02 could not be ruled out as it is not represented in our LSAB panel. DSA to DRB5*01:02 could not be ruled out as it is not represented in our LSAB panel.
8029	198	14	Positive	A1 (10695)	Positive	DQ6 (14838)	DRB4*01:03:01 and DRB5*01:02:01 are not covered in lifecodes Class II beads
8080	198	96	Positive	A1 (21645)	Positive	DQ6 (26645)	
8083	198	92.14	Positive	A1 (21284)	Positive	DQ6 (27030) DQA1*01 (27030)	DSA to Class II antibodies. DSA to class I antibodies.
8103	198	27	Positive	A1 (18210)	Positive	DQ6 (22920) DQA1*01 (22920)	high MFI
8110	198	99%	Positive	A1 (23580)	Positive	DQ6 (24217)	
14262	198	96	Positive	A1 (15494)	Positive	DQ6 (23708)	

Table 28. Individual Virtual crossmatch results for Serum #198 vs Donor# V2

Donor #V2 HLA A*03:01:01-A*23:01:01-B*49:01:01-B*53:01:01-C*04:01:01-C*07:01:02/DRB1*11:01:02-DRB1*16:02:01G-DRB3*02:02:01-DRB5*02:02:01-DQA1*01:02:01-DQA1*01:02:02-DQB1*05:02:01G-DQB1*06:02:01G-DPA1*01:03-DPA1*03:01-DPB1*04:01:01G-DPB1*105:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	198	52	Positive	A3 (9114)	Positive	DQ5 (18771) DQ6 (17554) DQA1*01 (18387)	
792	198	88.57	Positive	A3 (8826)	Positive	DQ5 (13918) DQ6 (16330)	
1461	198	16	Positive	A3 (3411)	Positive	DQ5 (8234) DQ6 (11056) DQA1*01 (11056)	
2400	198	99	Positive	A3 (9452)	Positive	DQ5 (21172) DQ6 (22282)	
3632	198	92	Positive	A3 (9750)	Positive	DQ5 (16694) DQ6 (19392)	
3753	198	96	Positive	A3 (8567)	Positive	DQ5 (21026) DQ6 (24061)	
3808	198		Positive	A3 (2646)	Positive	DQ5 (6310) DQ6 (11877) DQA1*01 (11877)	Unacceptable
3966	198	96%	Positive	A3 (6603)	Positive	DQ6 (19590)	Unacceptable
5130	198	95210%	Positive	A3 (10224)	Positive	DQ5 (16516) DQ6 (17968) DQA1*01 (17968)	
8001	198	96	Positive	A3 (9510)	Positive	DQ5 (16631) DQ6 (18948)	DSA to C*07:01 could not be ruled out as it is not represented on our LSAB panel. DSA to DQA1*01:02 could not be ruled out due to DQB* overlap; DSA to DPB1*105:01 could not be ruled out as it is not represented on our LSAB panel.
8029	198	14	Positive	A3 (6986)	Positive	DQ5 (11099) DQ6 (15909)	DPB1*105:01:01 is not covered in lifecodes Class II beads
8080	198	96	Positive	A3 (10530)	Positive	DQ5 (19136) DQ6 (21566)	
8083	198	92.14	Positive	A3 (13058)	Positive		DSA to class I antibodies
8103	198	27	Borderline	A3 (9755)	Positive	DQ6 (16871) DQA1*01 (17735)	low class I ab MFI; high class II MFI
8110	198	100%	Positive	A3 (9603)	Positive	DQ5 (23389) DQ6 (24217)	
14262	198	96	Positive	A3 (7541)	Positive	DQ5 (14744) DQ6 (17446)	

Table 29. Individual Virtual crossmatch results for Serum #198 vs Donor# V3

Donor #V3 HLA A*02:06:01-B*15:02:01-B*44:03:02-C*07:06:01-C*08:01:01/DRB1*07:01:01G-DRB1*12:02:01-DRB3*03:01:03-DRB4*01:01:01G-DQA1*02:01:01-DQA1*06:01:01-DQB1*02:01:01G-DQB1*03:01:01G-DPA1*02:02:02-DPB1*05:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	198	48	Negative	No class I DSA	Negative	No class II DSA	
792	198	88.57	Negative	No class I DSA	Negative	No class II DSA	No Class II DSA
1461	198	16	Negative	No class I DSA	Negative	No class II DSA	
2400	198	99	Negative	No class I DSA	Positive	DR52 (4605)	
3632	198	92	Negative	No class I DSA	Negative	DR52 (2147)	Class II DSA was identified to DR52, however this level of DSA is unlikely to cause a positive B cell FXM due to low expression of DR52 on cell surface.
3753	198	96	Negative	No class I DSA	Negative	No class II DSA	
3808	198		Negative	No class I DSA	Negative	No class II DSA	Acceptable
3966	198	96%	Negative	No class I DSA	Positive	DR52 (1665)	DR52 (DRB3*03:01)
5130	198	95210%	Negative	No class I DSA	Positive	DQA1*02 (6832)	
8001	198	96	Negative	No class I DSA	Negative	DR52 (1655)	DSA to C*07:06 could not be ruled out as it is not represented on our LSAB panel. DR52 allele detected: DRB3*03:01
8029	198	14	Negative	No class I DSA	Negative	No class II DSA	A*02:06:01 and C*07:06:01 are not covered in lifecodes Class I beads
8080	198	96	Negative	No class I DSA	Borderline	DR52 (2106)	
8083	198	92.14	Negative	No class I DSA	Negative	No class II DSA	
8103	198	27	Negative	No class I DSA	Negative	No class II DSA	
8110	198	99%	Negative	No class I DSA	Negative	No class II DSA	
14262	198	96	Negative	No class I DSA	Negative	No class II DSA	

Table 30. Individual Cutoff values and Pretreatment - Exchange 33

Ctr	Serum #	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment
230	195	A	4500	DRB1	4500	One Lambda	Explex/Single Antigen	None
		B	4500	DRB3/4/5	4500			
		C	10000	DQA1	4500			
		Class I		DQB1	4500			
				DPB1	10000			
				Class II				
615	195	A		DRB1		One Lambda	Single Antigen	EDTA
		B		DRB3/4/5				
		C		DQA1				
		Class I	500	DQB1				
				DPB1				
				Class II	500			
792	195	A	1500	DRB1	1500	One Lambda	Single Antigen	FBS/EDTA
		B	1500	DRB3/4/5	1500			
		C	1500	DQA1	1500			
		Class I	1500	DQB1	1500			
				DPB1	1500			
				Class II	1500			
2400	195	A	2000	DRB1	2000	One Lambda	Single Antigen	EDTA
		B	2000	DRB3/4/5	2000			
		C	2000	DQA1	2000			
		Class I	2000	DQB1	2000			
				DPB1	2000			
				Class II	2000			
3224	195	A	1000	DRB1	1000	One Lambda	Single Antigen	EDTA
		B	1000	DRB3/4/5	1000			
		C	1000	DQA1	1000			
		Class I	1000	DQB1	1000			
				DPB1	1000			
				Class II	1000			

Table 30. Individual Cutoff values and Pretreatment - Exchange 33

Ctr	Serum #	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment
3632	195	A	2000	DRB1	2000	One Lambda	Explex/Single Antigen	EDTA
		B	2000	DRB3/4/5	2000			
		C	2000	DQA1	2000			
		Class I		DQB1	2000			
				DPB1	5000			
		Class II						
3753	195	A	1000	DRB1	1000	One Lambda	Single Antigen	DTT
		B	1000	DRB3/4/5	1000			
		C	2000	DQA1	1000			
		Class I	1000	DQB1	1000			
				DPB1	2000			
		Class II	1000					
3808	195	A		DRB1		Immucor	Single Antigen	None
		B		DRB3/4/5				
		C		DQA1				
		Class I	420	DQB1				
				DPB1				
		Class II	750					
5130	195	A	2000	DRB1	2000	ThermoFisher One	Single Antigen	None
		B	2000	DRB3/4/5	2000			
		C	2000	DQA1	2000			
		Class I	2000	DQB1	2000			
				DPB1	2000			
		Class II	2000					
5214	195	A	2000	DRB1	2000	One Lambda	Single Antigen	EDTA
		B	2000	DRB3/4/5	2000			
		C	2000	DQA1	2000			
		Class I	2000	DQB1	2000			
				DPB1	2000			
		Class II	2000					

Table 30. Individual Cutoff values and Pretreatment - Exchange 33

Ctr	Serum #	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment
8001	195	A	1000	DRB1	1000	One Lambda	Single Antigen	EDTA
		B		DRB3/4/5				
		C		DQA1				
		Class I		DQB1				
		Class II		DPB1				
8029	195	A	500	DRB1	500	IMMUCOR	Single Antigen	EDTA
		B	500	DRB3/4/5	500			
		C	500	DQA1	500			
		Class I	42	DQB1	500			
				DPB1	500			
				Class II	22			
8083	195	A	2000	DRB1	2000	One Lambda	Single Antigen	EDTA
		B		DRB3/4/5				
		C		DQA1				
		Class I		DQB1				
		Class II		DPB1				
8111	195	A	1000	DRB1	1000	One Lambda	Single Antigen	EDTA
		B	1000	DRB3/4/5	1000			
		C	1000	DQA1	1000			
		Class I	1000	DQB1	1000			
				DPB1	1000			
				Class II	1000			
14262	195	A	1000	DRB1	1000	One Lambda	Single Antigen	DTBA
		B		DRB3/4/5				
		C		DQA1				
		Class I		DQB1				
		Class II		DPB1				
				Class II	1000			