

Report of the 32nd Single Antigen, Flow and Virtual Crossmatch Exchange

September 11, 2024

Cells	187-188
Serum	189-192

In this study, virtual donor V3 and serum 185 (patient 1) from Exchange 31 (April, 2024) are re-examined as cell 187 and serum 189. A comparison of virtual crossmatch predictions (VXM) (V3 vs. serum 185 against the physical flow crossmatch (FXM) (**cell 187 vs. serum 189**) are summarized in **Part 1** of this report. **Part 2** examines the Luminex single antigen (SAB)

data for serum sample nos. **189 - 192**. **Part 3** summarizes the FXM results for **cells 187 and 188** against the 4 sera. Finally, in **Part 4**, the VXM predictions for 3 potential donors (V1 - V3) against serum 191 and serum 192 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. Seventeen labs submitted virtual crossmatch predictions in Exchange 31. Among them, 10 labs reported back physical FXM results in Exchange 32 (Table 1a). For donor V3 vs. serum 185, all 10 labs predicted the expected T/B-cell FXM to be positive. Multiple DSA (B35,

B57, Cw4, DR13, DR52) were reported against the donor. The strength of the highest DSA (B35) was 11525 ± 5246. In this present study, the same 10 labs reported the physical T/B-cell FXM for cell 187 vs. serum 189 as positive, in agreement with predictions (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 031					Exchange 032				
Virtual Crossmatch - Donor V3 vs. Serum 185					Physical Flow Crossmatch - Cell 187 vs. Serum 189				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V3	185	10	POS	POS	187	189	10	POS	POS

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

		T-cell Virtual XM (Exchange 31)					B-cell Virtual XM (Exchange 31)		
		+	-	∅			+	-	∅
Physical T-cell FXM (Exchange 32)	+	10			Physical B-cell FXM (Exchange 32)	+	10		
	-					-			
	∅					∅			

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

n = number of labs

studies. In Exchange 31, labs reported B35, DR13, and DR52 as DSA. Respective MFIs for each were 11525, 6700, and 2451. Weak anti-A2 (2273), -B57 (1750), and -Cw4 (1329) reactivity was also reported against the donor by some labs. In Exchange 32, anti-B35, -DR13, and -DR52 reactivity

was reported against cell 187, with respective MFI = 12500, 7494, and 3122. A2 (2295), B57 (2000), and Cw4 (1616) were also reported as DSA by a few labs.

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 031					Exchange 032				
Virtual Crossmatch - Donor V3 vs. Serum 185 (Patient 1)					Physical Flow Crossmatch - Cell 187 vs. Serum 189				
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	B35(16783) Cw 4(3019)	Positive	DR13(7826) DR52(6064)	230	Positive	A2,B35,B57	Positive	Dr13,Dr52
792	Positive	B57(2080) B35(10926) A2(2473)	Positive	DR13(6671) DR52(2508)	792	Positive	B35(11231), A2(2462), B57(1983)	Positive	DR13(8947), DR52(3838), DQ6(2116)
2400	Positive	B57(1845) B35(11288) A2(2426) Cw 4(1165)	Positive	DR13(5859) DR52(3242) DQ6(1607)	2400	Positive	A*02:01(2250) B*35:03(12935) B57:03(2248) C*04:01(1553)	Positive	DRB1*13:02(7488) DRB3*03:01(3838) DQB1*06:04(1200)
3753	Positive	B57(1728) B35(12665) A2(1978) Cw 4(2209)	Positive	DR13(6877) DR52(2142)	3753	Positive	B35(13412), B57(1757),	Positive	DR13(8213), DR52(2571)
3808	Positive	B35(4093)	Positive	DR13(2490) DR52(1091)	3808	Positive	B*35(3964)	Positive	DRB1*13(2334), DRB3*03:01(982)
3966	Positive	B57(1358) B35(11141) A2(1647)	Positive	DR13(7024) DR52(2006)	3966	Positive		Positive	
5130	Positive	B35(11105) A2(2998)	Positive	DR13(3704) DR52(3267)	5130	Positive		Positive	
8001	Positive	B57(1565) B35(11501) A2(2121) Cw 4(1258)	Positive	DR13(7505) DR52(3026)	8001	Positive	A2(2505) B35(12534) B57(1903) C*04:01(1212)	Positive	DR13(7494) DR52(3072)
8083	Positive	B57(1930) B35(14064) A2(2680) Cw 4(1204)	Positive	DR13(7907) DR52(3615)	8083	Positive	A*02:01(3853), B*35(16420) *No bead for B*35:03	Positive	DRB1*13(8224), DRB3*03:01(3683) *No Bead for DRB1*13:02
14262	Positive	B57(1477) B35(5271) A2(1615) Cw 4(1176)	Positive	DR13(1587) DR52(1739)	14262	Positive	B*35:03(7910), B*57:03(2131),	Positive	DRB1*13:02(1867), DRB3*03:01(2051)

Part 2

Class I and class II Luminex single antigen results for serum samples 189 - 192 are summarized in Tables 12 - 15. Individual listing of results for

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

Antibody Identification

Serum 189 This sample was previously examined as serum 185 in Exchange 31. A comparison of reported antibodies and antibody strength are shown in the following table:

Exchange 31 Class I		Exchange 32 Class I		Exchange 31 Class II		Exchange 32 Class II	
** Serum 185 **		** Serum 189 **		*** Serum 185 ***		*** Serum 189 ***	
Antigen	Median	Antigen	Median	Antigen	Median	Antigen	Median
A29	24796	A29	25535	DR14	8164	DR14	9847
A1	20150	A1	21128	DR13	6700	DR13	7494
A36	17974	A36	18263	DR9	6592	DR9	6235
B56	13281	B56	14079	DR11	6306	DR11	7236
B35	11525	B35	12500	DR18	5094	DR18	5540
B71	11192	B71	12198	DR8	4945	DR8	5365
B75	11124	B75	10897	DR17	4629	DR17	4900
B55	10898	B55	11370	DR53	3333	DR53	4133
B53	10268	B53	11000	DR1404	2965	DR1404	4041
A43	10243	A43	10799	DR12	2911	DR12	3160
B51	9551	B51	10000	DR10	2859	DR10	3156
B49	9384	B49	9538	DR52	2451	DR52	3122
A30	9347	A30	9269	DR1403	2114	DR1403	2560
A80	8136	A80	8701	DQ2	1709	DQ2	1915
B42	7872	B62	8122	DR3	1653	DR3	1611
B62	7628	B42	8112	DQ5	1564	DQ5	2460
A26	7256	A26	7821	DR7	1362	DR7	1200
B77	7234	B67	7802	DQ6	577	DQ6	1431

Strong anti-B35 (12500) and -DR13 (7494) reactivity was reported against cell 187. In addition, a few labs reported A2 (2295), B57 (2000), Cw4 (1616), and DR52 (3122) as DSA as well. Against cell 188, anti-A1 (21128), -A69 (2068), -B41 (1828), -DR11 (7236), -DR13 (7494), and -DR52 (3122) reactivity was reported by labs.

*(median MFI by SAB)

Genotypes of cells provided by UCLA

Cell 187 (Hispanic): 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

Serum 190: Strong (MFI > 20000) class I and class II reactivity was reported in this sample, including anti-B49 (20502), -A32 (20244), -B51 (19204), -B57 (19124), -B59 (18713), -B63 (18486), -DQ6 (23700), -DQ5 (21944), -DR17 (16677), -DR14 (15809), and -DR103 (15485) reactivity.

Multiple DSA (B57, A2, B35, DQ6, DR52, DR13) were reported against cell 187. Respective MFIs for each were 19124, 7195, 3709, 23700, 1350, and 22804. Several labs also reported DQA1*01 (11881) as a DSA. Against cell 188, anti-Cw17 (4840), -A69 (1360), -DR11 (14562), -DR52 (13504), and -DR13 (22804) reactivity was reported.

Serum 191: Strong reactivity to a number of 7C specificities, including B67 (18321), B7 (18177), B42 (17000), B55 (16818), B73 (16002), B56 (16001), B82 (13260), and B54 (13073) was reported in this sample. Class II reactivity was also detected, with 100% of labs reporting anti-DR1 (7910), -DR103 (7766), -DR10 (6384), -DR7 (4225), and -DR51 (3258) reactivity.

A2 (12244), B57 (7693), A3 (7621), and Cw4 (2731) were the reported DSA against cell 187. Against cell 188, A1 (10981), B8 (9405), and A69 (7804) were the reported DSA. Labs were split in the reporting of class II DSA against each cell, with some labs (n = 5) reporting DR52 (2376) as a DSA and the remainder indicating no class II DSA were present.

Serum 192: Strong class I and class II reactivity was detected in this sample, including anti-B57 (11831), -B58 (9257), -A2 (8600), -DR15 (22980), -DR16 (22795), -DR1 (20022), -DR51 (17778), -DR7 (14487), -DR9 (12418), and -DR103 (20818) reactivity.

Multiple class I DSA (B57, A2, B35) were reported against cell 197. Respective MFIs for each were 11831, 8600, and 2192. No class II DSA were reported against the cell. Against cell 188, neither class I or class II DSA were reported.

Cell 188 (Caucasian): A*01:01:01-A*69:01:01-B*08:01:01-B*41:02:01-C*07:01:01-C*17:03:01-DRB1*11:04:01-DRB1*13:03:01-DRB3*01:01:02G-DRB3*02:02:01G-DQA1*05:05:01-DQB1*03:01:01G-DPA1*01:03:01G-DPB1*04:01:01G-DPB1*04:02:01G

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 > 11000 MFI and class II antibodies of > 7900 MFI were present.

A total of 15 labs submitted single antigen data for samples 189 - 192. Each of the 15 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), 6 labs (40%) indicated they treated the sera with EDTA prior to testing. Three labs (20%) treated with DTT, 2 labs (13%) used a combination of FBS/FCS 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

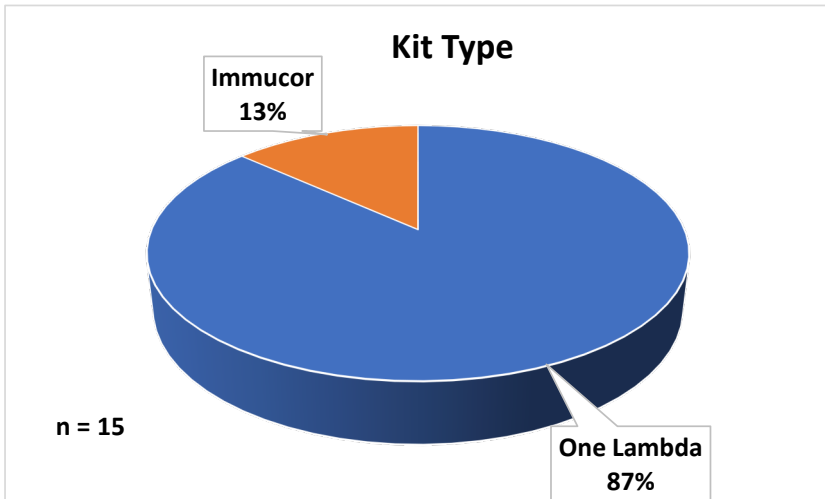
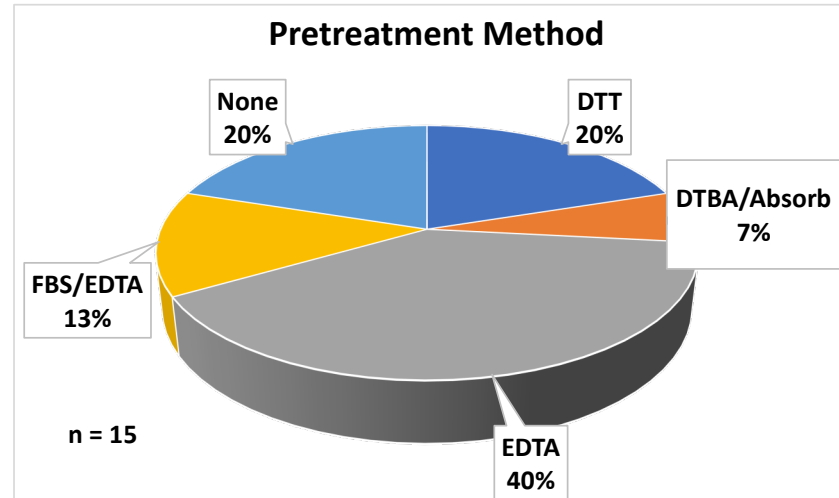


Figure 2. Sera pretreatment breakdown



Part 3

Flow cytometric crossmatch results for cell 187 and cell 188 against serum samples 189 - 192 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 187. For this cell, $\geq 80\%$ agreement was achieved across all 8 T/B FXM. Each were reported as positive in the presence of class I DSA of > 11000 MFI.

Cell 188. For this cell, $\geq 80\%$ agreement was achieved for 6 of 8 T/B cell FXM. Among them, 5 were reported as positive in the presence of class I or

class II DSA of > 10000 MFI. In the case of cell 188 vs. serum 190, 9 labs reported the T-cell FXM as positive, 3 labs reported it as negative, and 1 lab reported borderline results. DSA of < 5000 MFI were reported. Against serum 192, 10 labs reported the B-cell FXM as negative in the absence of class I/II DSA, while 3 labs reported a positive B-cell FXM.

Table 2. Summary of Flow crossmatch results for Cell #187- #188 vs. Serum #189 - #192

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
187	189	13	POS(13)	POS(13)	188	189	13	POS(13)	POS(13)
187	190	13	POS(13)	POS(13)	188	190	13	POS(9) NEG(3) Borderline(1)	POS(13)
187	191	13	POS(13)	POS(12) Borderline(1)	188	191	13	POS(13)	POS(13)
187	192	13	POS(13)	POS(12) Borderline(1)	188	192	13	NEG(13)	NEG(10) POS(3)

consensus $< 80\%$

Conclusion:

Good agreement ($\geq 80\%$) was achieved for 7 of 8 T-cell FXM. In the case of the positive FXM, strong (> 10000 MFI) class I DSA were present. For cell 188 vs. cell 190, the discrepancies observed in the T-FXM were likely due to weak DSA (Cw17, A69). Respective MFIs for each were 4840 ± 2264 and 1360 ± 542 .

Good agreement ($\geq 80\%$) was achieved for 7 of 8 B-cell FXM. Each were reported as positive in the presence of class I or class II DSA of > 10000 MFI. For cell 188 vs serum 192, 10 labs reported the B-cell FXM as negative and 3 labs reported it as positive. All 13 labs indicated there were neither class I or class II DSA present.

Part 4

Virtual XM predictions for each virtual donor (V1 - V3) against serum samples 191 and 192 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, 4 are predicted to be positive in the presence of class I DSA of > 8000 MFI. For V3 vs. serum 191, several discrepancies were observed. Thirteen labs predict the expected T-cell FXM to be positive, 2 labs predict it to be negative, and 1 pre-

dicts it to be borderline. The strength of the highest DSA (Cw15) was < 4000 MFI.

For virtual **B-cell predictions** of the expected B-cell FXM, $\geq 80\%$ agreement was achieved for all 6 challenges. In 5 of the 6 challenges, class I and/or class II DSA of > 8000 MFI were present.

Table 3. Summary of Virtual Crossmatch Predictions (Serum #191 - #192 vs. Donors V1 - V3)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction
V1	191	15	POS(15)	POS(15)
V1	192	16	POS(15) NEG(1)	POS(16)
Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction
V2	191	16	POS(16)	POS(16)
V2	192	16	POS(15) Borderline(1)	POS(16)
V3	191	16	POS(13) NEG(2) Borderline(1)	POS(15) NEG(1)
V3	192	16	NEG(15) POS(1)	POS(15) NEG(1)

DSA Identification

Patient 1 (Serum 191)

Patient's fictional case history: This individual is a 54-year-old female being evaluated for her first transplant. Patient has had 1 prior pregnancy. The HLA type of the child is A*26:01- A*11:01-B*15:01- B*18:01-C*01:02-C*07:02-DRB1*04:02-DRB1*09:01-DRB4*01:01-DRB4*01:03-DQA1*03:03-DQA1*02:01-DQB1*04:01-DQB1*02:01-DPA1*02:02-DPA1*01:03-DPB1*01:01-DPB1*04:02. Patient 1's HLA type is as follows:

A*26:01 A*34:01	B*15:01 B*18:01	C*01:02 C*07:02			
DRB1*04:02 DRB1*08.01	DRB4*01:01	DQA1*03:03 DQA1*01:02	DQB1*04:01 DQB1*05:02	DPA1*02:02	DPB1*01:01, DPB1*05:01

Multiple DSA (A2, A24, DR51) were reported against **donor V1**. Respective median MFI values for each were 12224, 3899, and 3258. Several labs noted the donor's A*02:07 allele is not represented on their single antigen panel. Consequently, 2 labs did not report A2 as a DSA. All 15 labs predict the expected T/B-cell FXM to be positive for this donor-patient pair.

Anti-A2 (12224) and -DR7 (4225) reactivity was reported against **donor V2**. In addition, weak anti-DQ2 (1741) and -DP17 (1640) reactivity was reported by various labs. For virtual predictions, all 16 labs predict the expected T/B-cell FXM to be positive.

Cw15 (3900), A11 (1964), Cw4 (2731), DR9 (2407), and DR51 (3258) were the reported DSA against **donor V3**. A number of labs noted the donor's C*04:82 allele is not represented on their single antigen bead panel. For T-cell predictions, 13 labs predict the physical T-cell FXM to be positive. Two labs predict it to be negative and 1 lab predicts borderline results. In the case of the negative predictions, 1 lab noted there were no class I DSA present and the other indicated low MFI. For the B-cell FXM, all but 1 lab predicts the expected B-cell FXM to be positive. The 1 lab predicting a negative B-cell FXM, noted weak class I and the absence of class II DSA.

Virtual Donors – HLA genotype

Donor 1 (V1): A*02:07:01-A*24:02:01-B*46:01:01-B*48:01:01-C*01:02:01-C*08:01:01/DRB1*11:01:01-DRB1*15:01:01G-DRB3*02:02:01-DRB5*01:01:01G-DQA1*01:02:01-DQA1*05:05:01-DQB1*03:01:01G-DQB1*06:02:01G-DPA1*02:01:01-DPA1*02:02:02-DPB1*05:01:01G-DPB1*14:01:01G

Donor 2 (V2): 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

Donor 3 (V3): A*11:01:01-A*34:01:01-B*40:01:02-B*40:02:01-C*04:82:01-C*15:02:01G/DRB1*09:01:02G-DRB1*15:02:01G-DRB4*01:01:01G-DRB5*01:01:01G-DQA1*01:01:01-DQA1*03:02:01-DQB1*03:03:02G-DQB1*05:01:01G-DPA1*02:01:01-DPA1*02:02:02G-DPB1*05:01:01G-DPB1*31:01:01

Patient 2 (Serum 192)

Patient's fictional case history: This individual is a 40-year-old male being evaluated for his first transplant. **Patient 2's HLA type** is as follows:

A*30:01 A*30:02	B*81:01 B*07:02	C*18:01 C*07:01			
DRB1*08:01 DRB1*13:02	DRB3*03:01	DQA1*04:01 DQA1*01:02	DQB1*04:02 DQB1*06:04	DPA1*01:03 DPA1*02:01	DPB1*04:02 DPB1*13:01

Multiple DSA (A2, B46, DR15, DR51) were reported against **donor V1**, with respective median MFI values of 8600, 2325, 22980, and 17778. In the presence of multiple DSA, 15 labs predict the expected T-cell FXM to be positive and 16 labs predict the expected B-cell FXM to be positive. One lab predicting a negative T-cell FXM noted the absence of class I DSA.

Against **donor V2**, anti-A2 (8600), -DR7 (14487), and -DR53 (10361) reactivity was reported. B39 (1304) and B65 (1216) were also reported as DSA by some labs. For virtual predictions, 15 labs predict the physical T-cell FXM to be positive and all 16 predict the physical B-cell FXM to be positive. One lab predicting the physical T-cell FXM to be borderline, noted the DSA present was weak (1000 MFI).

Strong class II DSA (DR9, DR15, DR51, DR53) were reported against **donor V3**. Respective median MFI values for each were 12418, 22980, 17778, and 10361. No class I DSA were reported. For T-cell predictions, all but 1 lab predicts the expected T-cell FXM to be negative. For B-cell predictions, 16 of 16 labs predict the expected B-cell FXM to be positive.

Conclusion

For **serum 191**, $\geq 80\%$ agreement was achieved among labs in the reporting of virtual crossmatch predictions against all 3 donors. No discrepancies were observed for T/B-cell predictions against donors V1 and V2. Expected T/B-cell FXM in each case are predicted to be positive in the presence of class I and/or class II DSA of > 10000 MFI. Discrepancies observed in T-cell predictions against donor V3, were likely due to weak DSA (MFI < 4000) at the C-locus.

For **serum 186** against all 3 virtual donors, $\geq 80\%$ agreement was achieved among labs with respect to virtual crossmatch predictions against donors V1 - V3. In the case of the positive T/B-cell predictions, class I and/or class II DSA of > 8000 MFI were reported by labs.

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Flow Cytometric Crossmatch

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

Table 4. Individual Flow crossmatch results and DSA reported for Cell #187 vs. Serum #189

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	189	1.6	2			Positive	A2,B35,B57	3.3				Positive	Dr13,Dr52	0.8	1.11	YES
615	189	301	267			Positive Strong	A2 (2295) B35 (10610) B57 (1573) C*04 (1016)	426	231			Positive	DRB1*13 (8442) DQB1*06:04 (744), DRB3*03:01 (3953)	228	332	YES
792	189	57	224			Positive	B35(11231), A2(2462), B57(1983)	107	305			Positive	DR13(8947), DR52(3838), DQ6(2116)	257	299	YES
2400	189	36	350	NA	NA	Positive	A*02:01(2250) B*35:03(12935) B57:03(2248) C*04:01(1553)	48	377	NA	NA	Positive	DRB1*13:02(7488) DRB3*03:01(3838) DQB1*06:04(1200)	270	304	YES
3753	189	50	256			Positive	A2(2104), B35(13412), B57(1757), Cw4(2510)	120	378			Positive	DR13(8213), DR52(2571)	267	274	YES
3808	189	332	237			Positive	B*35(3964)	482	147			Positive	DRB1*13(2334), DRB3*03:01(982)	263	369	YES
3966	189	20	178			Positive		50	203			Positive		184	323	NO
5130	189	61	548			Positive		77	666			Positive		336	522	YES
5214	189	19	87		28647	Positive	A02:01, B57:03, C04:01	28	101		73582	Positive	DRB3*03:01, DQB06:04	256	269	YES
8001	189	50	297			Positive	A2 (2505) B35 (12534) B57 (1903) C*04:01 (1212)	100	296			Positive	DR13(7494) DR52(3072)	226	339	YES
8083	189	74	400			Positive	A*02:01(3853), B*35(16420) *No bead for B*35:03	108	255			Positive	DRB1*13(8224), DRB3*03:01(3683) *No Bead for DRB1*13:02			YES
8111	189	76	1615			Positive	B35(12500), B57(2200), A2(2000), Cw4(1600)	114	3672			Positive	DR13(6500), DR52(3400)	237	298	YES
14262	189	67	254.7			Positive	A*02:01(1202), B*35:03(7910), B*57:03(2131), C*04:01(1532)	82	327.9			Positive	DRB1*13:02(1867), DRB3*03:01(2051)	271	274.5	YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #187 vs. Serum #190

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	190	1.6	48.2			Positive	A2,B35,B57,Bw4	3.3	291.9			Positive	DR13,Dr52,DQ6, DQA1*01	0.8	1.11	YES
615	190	301	386			Positive Strong	A*02:01 (7848), B*57:03 (17995), C*04:01 (752) B35 (3715)	426	414			Positive	DRB3*03:01(14374), DRB1*13:01(23091), DQB1*06:04(19694)	228	332	YES
792	190	57	294			Positive	B57(19124), A2(6854), B35(3084)	107	452			Positive	DQ6(22932), DR13(22516), DR52(13520)	257	299	YES
2400	190	36	441	NA	NA	Positive	A*02:01(7229) B*35:03(3048) B*57:03(18352)	48	597	NA	NA	Positive	DRB1*13:02(22421) DRB3*03:01(13211) DQB1*06:04(18390)	270	304	YES
3753	190	50	342			Positive	A2(7195), B35(4162), B57(23795)	120	576			Positive	DR13(27572), DR52(13735), DQ6(26423)	267	274	YES
3808	190	332	364			Positive strong	B*57(8046), A*02:01(1995), B*35(953)	482	353			Positive strong	DRB1*13(12592), DQB1*06:04(9447), DQA1*01:02(9447), DRB3*03:01(5677)	263	369	YES
3966	190	20	283			Positive		50	348			Positive		184	323	NO
5130	190	61	654			Positive		77	854			Positive		336	522	YES
5214	190	19	111		68150	Positive	A02:01, B57:03	28	149		403663	Positive	DRB3*03:01, DQA01:02, DQB06:04	256	269	YES
8001	190	50	374			Positive	A2(7624) B35(3702) B57(22627) Bw4(23509-2686)	100	363			Positive	DR13(25577) DR52(14243) DQ6(20609) DQA1*01:02(24157)	226	339	YES
8083	190	74	135			Positive	A*02:01(9002), B*35(4551), B*57:03(24905) Bw4(26789) *No bead for B*35:03	108	246			Positive	DRB1*13(27023), DRB3*03:01(14621), DQB1*06:04(21764) *No Bead for DRB1*13:02			YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #187 vs. Serum #190, 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
8111	190	76	2597			Positive	B57(22000), A2(7700), B35(3800), Bw4(10000)	114	7828			Positive	DR13(25000), DQ6(21000), DR52(15500)	237	298	YES
14262	190	67	361.5			Positive	A*02:01 (1489), B*35:03 (1526), B*57:03 (16555)	82	551.7			Positive	DQB1*06:04, DQA1*01:02(15615), DRB1*13:02(13823), DRB3*03:01(9515)	271	274.5	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #187 vs. Serum #191

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	191	1.6	4.8			Positive	A2,A3,B57,Cw4	3.3	3.3			Borderline	DR52	0.8	1.11	YES
615	191	301	382			Positive Strong	A*02:01 (13335), A*03:01 (7002), B*57:03 (6882), C*04:01 (2731)	426	242			Positive	DRB3*03:01 (1003)	228	332	YES
792	191	57	318			Positive	A2(13189), A3(8233), B57(7328), Cw4(2568)	107	265			Positive	No Class II DSA	257	299	YES
2400	191	36	473	NA	NA	Positive	A*02:01(14389) A*03:01(9489) B*57:03(7432) C*04:01(2704)	48	364	NA	NA	Positive	DRB3*03:01(1405)	270	304	YES
3753	191	50	351			Positive	A2(13143), A3(10118), B57 (8503), Cw4 (3308),	120	276			Positive	DRB3*03(1327)	267	274	YES
3808	191	332	359			Positive strong	A*02:01(9216), A*03:01(4429), B*57(2808), C*04:01(787)	482	186			Positive moderate	No Class II DSA	263	369	YES
3966	191	20	259			Positive		50	180			Positive		184	323	NO
5130	191	61	656			Positive		77	637			Positive		336	522	YES
5214	191	19	113		72289	Positive	A02:01, A03:01, C04:01	28	85		43736	Positive	DRB3*03:01	256	269	YES
8001	191	50	382			Positive	A2 (11728) A3(7621) B57 (7246) Cw4 (2762)	100	265			Positive	No Class II DSA	226	339	YES
8083	191	74	284			Positive	A*02:01(16115), A*03:01(10818), B*57:03(9085), C*04:01(3615)	108	122			Positive	Class I DSA			YES
8111	191	76	3659			Positive	A2(11000), A3(7600), B57(6600), Cw4(2200), Bw4(2000)	114	3325			Positive	No Class II DSA	237	298	YES
14262	191	67	380.2			Positive	A*02:01 (10409), A*03:01 (6507), B*57:03 (7417), C*04:01 (2238)	82	316.6			Positive	No Class II DSA	271	274.5	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #187 vs. Serum #192

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	192	1.6	1.8			Positive	A2,B35,B57,Bw4	3.3	3.3			Borderline	No Class II DSA	0.8	1.11	YES
615	192	301	333			Positive Strong	A*02:01 (6187), B*57:03 (8034), B*35:01 (1604)	426	205			Positive	No Class II DSA	228	332	YES
792	192	57	222			Positive	B57(11745), A2(7623), B35(1929)	107	155			Positive	No Class II DSA	257	299	YES
2400	192	36	424	NA	NA	Positive	A*02:01(7907) B*35:03(2015) B57:03(12428)	48	338	NA	NA	Positive	No Class II DSA	270	304	YES
3753	192	50	292			Positive	A2(9837), B35(2467), B57(16515)	120	258			Positive	No Class II DSA	267	274	YES
3808	192	332	315			Positive		482				Positive	No Class II DSA	263	369	YES
3966	192	20	200			Positive		50	120			Positive		184	323	NO
5130	192	61	623			Positive		77	637			Positive		336	522	YES
5214	192	19	94		36038	Positive	A02:01, B57:03	28	69		25228	Positive	No Class II DSA	256	269	YES
8001	192	50	318			Positive	A2 (7075) B35 (1956) B57 (10802) Bw4 (11781-1791)	100	202			Positive	No Class II DSA	226	339	YES
8083	192	74	235			Positive	A*02:01(9926), Bw4(15168), B*57:03(14441), B*35(2773)*No Bead for B*35:03	108	118			Positive	No Class II DSA			YES
8111	192	76	2530			Positive	B57(12000), A2(8500), B35(2200), Bw4(2000)	114	2255			Positive	No Class II DSA	237	298	YES
14262	192	67	317.5			Positive	A*02:01 (7943), B*35:03 (2191), B*57:03 (11610)	82	272.3			Positive	No Class II DSA	271	274.5	YES

Cell #188 HLA genotype: A*01:01:01-A*69:01:01-B*08:01:01-B*41:02:01-C*07:01:01- C*17:03:01-DRB1*11:04:01-DRB1*13:03:01-DRB3*01:01:02G- DRB3*02:02:01G-DQA1*05:05:01-DQB1*03:01:01G-DPA1*01:03:01G-DPB1*04:01:01G- DPB1*04:02:01G

Table 8. Individual Flow crossmatch results and DSA reported for Cell #188 vs. Serum #189

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	189	1.6	2.2			Positive	A1,A69,B41	3.3	8.1			Positive	DR11,DR13,DR52	0.88	1.11	YES
615	189	297	222			Positive Strong	A*01:01(16646), A*69:01(1796), B*41(1540)	419	248			Positive	DRB1*13:03(8442), DRB1*11:04(7948), DRB3*02:02(1951), DRB3*01:01(1530)	224	325	YES
792	189	57	218			Positive	A1(19141), A69(1572)	107	323			Positive	DR11(9146), DR13(8947), DR52(3838)	256	313	YES
2400	189	36	270		NA	Positive	A*01:01(21066) A*69:01(2438) B*41:02(1704)	48	382	NA	NA	Positive	DRB1*11:04(8282) DRB1*13:03(8942) DRB3*01:01(1907) DRB3*02:02(2403)	268	309	YES
3753	189	50	174			Positive	A1(22213), A69(1945)	120	374			Positive	DR11(7769), DR13(8213), DR52(2571)	277	289	YES
3808	189	320	181			Positive	A*01:01(10030)	447	179			Positive Moderate	DRB1*11:04(2430), DRB1*13:03(2334)	251	344	YES
3966	189	20	208			Positive		50	269			Positive		182	299	NO
5130	189	61	510			Positive		77	732			Positive		359	614	YES
5214	189	19	62		11779	Positive	A01:01, A69, B41	28	98		72207	Positive	DR11:04, DR13:03, DRB3*01:01, DRB3*02:02	258	272	YES
8001	189	50	275			Positive	A1(21360) A69(2105) B41(1197)	100	313			Positive	DR11(6754) DR13(7494) DRB3*01:01(1391) DRB3*02:02(1777)	209	352	YES
8083	189	74	128			Positive	A*01:01(26026) A*69:01(3179)	108	127			Positive	DRB1*11:04(7502), DRB1*13:03(8224), DRB3*02:02(2188), DRB3*01:01(1646)			YES
8111	189	76	755			Positive	A1(21700), A69(1700), B41(1500)	114	3512			Positive	DR13(6900), DR11(6600), DR52(1500)	200	266	YES
14262	189	67	208.4			Positive	A*01:01(16459)	82	371.4			Positive	DRB1*11:04(4070), DRB1*13:03(4450)	270.5	268.5	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #188 vs. Serum #190

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	190	1.6	5.6			Positive	A69,Cw17	3.3	177.4			Positive	DR13,DR11,DR52	0.88	1.11	YES
615	190	297	22			Positive Weak	A*69:01(1869), C*17:01(4480)	419	291			Positive	DRB1*13:03(21049), DRB1*11:04(16879), DQA1*05:05(1197), DPB1*04:02(628), DR52(14380)	224	325	YES
792	190	57	88			Positive	Cw17(3362)	107	375			Positive	DR13(22516), DR11(14562), DR52(13520)	256	313	YES
2400	190	36	119	NA	NA	Positive Strong	A*69:01(1660) C*17:03(3546)	48	510	NA	NA	Positive	DRB1*11:04(13300) DRB1*13:03(20005) DRB3*01:01(8309) DRB3*02:02(11679)	268	309	YES
3753	190	50	28			Negative	Cw17(5976)	120	463			Positive	DR11(17086), DR13(27572), DR52(13735)	277	289	YES
3808	190	320	-21			Borderline	Potential C*17:01(1453) but cell is C*17:03	447	290			Positive	DRB1*13:03(9615), DRB1*11:04(7670)	251	344	YES
3966	190	20	44			Positive		50	378			Positive		182	299	NO
5130	190	61	424			Positive strong		77	815			Positive strong		359	614	YES
5214	190	19	25		2122	Positive	A69, C17:03	28	118		148993	Positive	DR11:04, DR13:03, DRB3*01:01, DRB3*02:02, DQA05:05	258	272	YES
8001	190	50	135			Positive	A69(1419) Cw17(4307)	100	324			Positive	DR11(16271) DR13(22985) DRB3*01:01(9228) DRB3*02:02(12292)	209	352	YES
8083	190	74	-9			Negative		108	159			Positive	DRB1*11:04(16785), DRB1*11:04(16785), DRB3*01:01(9476), DRB3*02:02(12312)			YES
8111	190	76	133			Positive	Cw17(5000), A69(1250)	114	8794			Positive	DR13(23300), DR11(17200), DR52(11500)	200	266	YES
14262	190	67	39.5			Negative	C*17:03 (1828)	82	496.5			Positive	DRB1*11:04(11247), DRB1*13:03(16832), DRB3*01:01(6239), DRB3*02:02(7409)	270.5	268.5	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #188 vs. Serum #191

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	191	1.6	2.9			Positive	A1,A69,B8,Cw17	3.3	4.2			Positive	Dr52 and also due to class I	0.88	1.11	YES
615	191	297	328			Positive Strong	A*01:01 (10981), A*69:01 (8503), B*08:01 (9405), C*17:01 (2873)	419	184			Positive Moderate	DRB3*01:01 (944)	224	325	YES
792	191	57	312			Positive	A1(11974), B8(9634), A69(7273), Cw17(1763)	107	228			Positive	No Class II DSA	256	313	YES
2400	191	36	386	NA	NA	Positive	A*01:01(12823) A*69:01(10175) B*08:01(11571) C*17:03(2515)	48	290	NA	NA	Positive	DRB3*01:01(1257)	268	309	YES
3753	191	50	277			Positive	A1(14978), A69(7804), B8(12385), Cw17(3476)	120	228			Borderline	No Class II DSA	277	289	YES
3808	191	320	280			Positive Strong	A*69:01(5486), B*08:01(4729), A*01:01(4188), C*17:01(1288)	447	169			Positive Moderate	No Class II DSA	251	344	YES
3966	191	20	231			Positive		50	291			Positive		182	299	NO
5130	191	61	618			Positive		77	742			Positive		359	614	YES
5214	191	19	89		33064	Positive	A01:01, A69, B8, C17	28	59		16709	Positive	DRB3*01:01	258	272	YES
8001	191	50	373			Positive strong	A1(11306) A69(7927) B8(8825) Cw17(2793)	100	218			Positive moderate	No Class II DSA	209	352	YES
8083	191	74	107			Positive	A*01:01(14426), A*69:01(11292), B*08:01(13243)	108	291			Positive	Class I DSA			YES
8111	191	76	2828			Positive	A1(10600), B8(9200), A69(7000), Cw17(1900)	114	2155			Positive	No Class II DSA	200	266	YES
14262	191	67	322.8			Positive	A*01:01 (9578), A*69:01 (5845), B*08:01 (9283), C*17:03 (1391)	82	256.9			Positive	No Class II DSA	270.5	268.5	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #188 vs. Serum #192

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	192	1.6	1			Negative	No Class I DSA	3.3	2			Negative	No CClass II DSA	0.88	1.11	YES
615	192	297	-63			Negative	No Class I DSA	419	-38			Negative	No CClass II DSA	224	325	YES
792	192	57	5			Negative	No Class I DSA	107	85			Negative	No CClass II DSA	256	313	YES
2400	192	36	24	NA	NA	Negative	No Class I DSA	48	132	NA	NA	Positive	No CClass II DSA	268	309	YES
3753	192	50	0			Negative	No Class I DSA	120	55			Negative	No CClass II DSA	277	289	YES
3808	192	320	-73			Negative	No Class I DSA	447	-67			Negative	No CClass II DSA	251	344	YES
3966	192	20	12			Negative		50	108			Positive		182	299	NO
5130	192	61	390			Negative		77	636			Negative		359	614	YES
5214	192	19	-6		-309	Negative	No Class I DSA	28	11		1186	Negative	No CClass II DSA	258	272	YES
8001	192	50	14			Negative	No Class I DSA	100	67			Negative	No CClass II DSA	209	352	YES
8083	192	74				Negative	No Class I DSA	108				Negative	No CClass II DSA			YES
8111	192	76	0			Negative	No Class I DSA	114	197			Positive	No CClass II DSA	200	266	YES
14262	192	67	0			Negative	No Class I DSA	82	66.8			Negative	No CClass II DSA	270.5	268.5	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #189

Class I							
*** Serum 189 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A29	15	100%	25535	25014	9393	6020	47283
A1	15	100%	21128	20464	8672	3293	40695
A36	15	100%	18263	18450	8024	2639	37265
B56	15	100%	14079	13947	7281	1912	31585
B35	15	100%	12500	12543	6759	1472	27691
B71	15	100%	12198	12043	6800	1446	28296
B55	15	100%	11370	11443	5806	1709	24673
B53	15	100%	11000	11329	5997	1403	24258
B75	15	100%	10897	11021	5316	1786	22986
A43	15	100%	10799	10722	5436	1257	22171
B49	15	100%	9538	10271	5781	1164	24207
A80	15	100%	8701	8734	4996	1471	20416
B62	15	100%	8122	8799	4653	963	20401
B42	15	100%	8112	8529	4839	991	18726
A26	15	100%	7821	7691	3660	901	15459
B67	15	100%	7802	8064	4585	972	18953
B77	15	100%	7550	8032	4384	873	18165
B50	15	100%	7411	7957	4490	845	18531
B72	15	100%	6939	7856	4715	775	18618
A30	14	93%	9269	8709	4257	1174	15652
B63	14	93%	6103	7002	3738	2187	15555
Cw9	13	86%	4088	4754	2630	816	11377
B54	13	86%	3585	4169	2214	847	9968
B46	13	86%	3442	4079	2172	846	9501
B7	13	86%	3057	3754	2380	748	10266
B82	13	86%	3052	3576	2191	713	9622
B78	13	86%	2834	3324	1838	762	7999
A2	13	86%	2295	2702	1621	700	7120
B51	12	80%	10000	9436	3474	1061	14281
A74	12	80%	2281	2838	1504	1268	6962
Cw10	11	73%	2410	2916	1480	1576	6896
A33	11	73%	2338	2739	1388	1379	6702
B81	11	73%	2284	2996	1806	1142	7846
A69	11	73%	2068	2693	1542	1572	7168
B57	11	73%	2000	2432	926	1639	4893
B58	11	73%	1800	2206	1157	712	5021

Class II							
*** Serum 189 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR14	15	100%	9847	8623	2829	3056	12065
DR13	15	100%	7494	7180	3076	2158	14715
DR11	15	100%	7236	6945	3077	2073	14514
DR9	15	100%	6235	6238	3494	1146	16130
DR8	15	100%	5365	5226	2612	1348	12820
DR17	15	100%	4900	4989	2372	1423	11250
DR53	15	100%	4133	3840	1733	947	8022
DR12	15	100%	3160	3150	1461	929	6795
DR18	14	93%	5540	5805	2276	2220	12041
DR52	14	93%	3122	2726	1059	909	3954
DR10	13	86%	3156	3437	1421	1096	7290
DR7	7	46%	1200	1433	668	644	2895
DQ5	6	40%	2460	2343	989	840	3868
DQ2	4	26%	1915	1823	480	1067	2398
DR1404	3	20%	4041	3897	1270	2275	5377
DR1403	3	20%	2560	2534	731	1626	3417
DQ6	2	13%	1431	1430	686	745	2116
DR3	1	6%	1611	1611	-	1611	1611
DQ9	1	6%	717	717	-	717	717

Blue = DSA against cell #187 only
Gold = DSA against cell #188 only
Green = DSA against cell #187 and #188

Table 13. Summary of Single Antigen results for Serum #190

Class I							
*** Serum 190 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B49	15	100%	20502	22015	8424	9484	47371
A32	15	100%	20244	22796	9429	9585	50807
B51	15	100%	19204	19545	7016	9283	39793
B57	15	100%	19124	20763	8330	8046	45105
B59	15	100%	18713	20435	7934	9345	44616
B63	15	100%	18486	20255	7840	9508	44427
A23	15	100%	18444	18801	9359	7612	45514
A25	15	100%	18420	18981	8128	7644	41155
A24	15	100%	17442	16989	8069	6596	37278
B38	15	100%	17432	18201	7193	8693	40204
B58	15	100%	16892	17524	6807	7432	37610
B53	15	100%	16199	17804	6981	7372	38246
B52	15	100%	15741	17442	6956	7770	38538
B77	15	100%	12227	12837	4730	6913	27263
B37	15	100%	11211	12753	5768	5206	29500
B44	15	100%	8779	9272	3381	3391	17309
Cw18	15	100%	7445	7457	4027	989	18608
A2	15	100%	7195	6991	3407	1426	15262
Cw6	15	100%	6378	6458	3395	963	15399
B78	15	100%	4015	4178	1894	1328	9364
B47	15	100%	3699	4216	2060	1704	9494
B13	14	93%	7117	6523	2852	791	11491
Cw15	14	93%	5470	5744	2663	842	12323
Cw17	14	93%	4840	4896	2264	1429	10638
B35	14	93%	3709	3771	1756	953	8500
B18	13	86%	2721	2954	1209	1100	6118
Cw5	12	80%	3484	3764	1732	789	8455
Cw2	11	73%	2903	3039	887	2061	5288
B27	9	60%	10707	11327	4125	5100	18795
B2705	7	46%	12535	14077	7897	4482	31793
B75	7	46%	1400	1336	449	509	2146
A69	6	40%	1360	1449	542	710	2366
A2403	5	33%	8810	16417	13637	7028	43145
Bw4	4	26%	12940	14719	4929	10000	23000
A203	3	20%	2531	2348	684	1435	3080
B7801	2	13%	2581	2580	1253	1328	3833

Class II							
*** Serum 190 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ6	15	100%	23700	22928	8086	9447	43588
DQ5	15	100%	21944	20981	9933	6895	51864
DR17	15	100%	16677	17192	7235	6850	38628
DR14	15	100%	15809	15886	6412	6543	34838
DR103	15	100%	15485	15982	7244	6275	38215
DR8	15	100%	15037	15810	6689	6696	36788
DR11	15	100%	14562	15664	6250	6716	34893
DR52	15	100%	13504	12523	4354	5332	22594
DR12	15	100%	12879	14123	6115	6101	32824
DR16	15	100%	12845	13621	6261	5518	32513
DQ4	15	100%	9282	9201	3553	2659	15718
DR15	15	100%	5929	5992	2843	2076	13825
DR7	15	100%	3740	4058	2253	1329	11202
DR13	14	93%	22804	23223	8691	10234	48153
DR18	14	93%	15986	17202	6183	8790	35703
DR4	10	66%	12043	12501	4202	5795	20859
DR51	10	66%	11154	11329	4730	4101	20047
DQA1*01	4	26%	11881	15024	6921	9447	26888
DR1403	2	13%	8815	8814	1249	7566	10063
DR1404	2	13%	7422	7421	1191	6231	8612
DQA1*05	2	13%	1599	1598	402	1197	2000
DP18	2	13%	1471	1471	435	1036	1906
DR1	2	13%	841	840	283	558	1123
DP13	1	6%	27023	27023	-	27023	27023
DR3	1	6%	6850	6850	-	6850	6850
DPw1	1	6%	2183	2183	-	2183	2183
DP11	1	6%	817	817	-	817	817

Blue = DSA against cell #187 only
Gold = DSA against cell #188 only
Green = DSA against cell #187 and #188

Table 14. Summary of Single Antigen results for Serum #191

Class I							
*** Serum 191 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B67	15	100%	18321	18275	7612	4825	39510
B7	15	100%	18177	18257	7487	4790	40596
B42	15	100%	17000	17251	7313	4384	38104
B55	15	100%	16818	16527	7259	4234	37757
B73	15	100%	16002	15613	7161	3817	35964
B56	15	100%	16001	15665	6808	4168	35392
B82	15	100%	13260	12870	5426	3309	29288
B54	15	100%	13073	13004	5479	2968	29301
A2	15	100%	12244	12620	5250	1906	28325
A1	15	100%	10981	11417	5652	1612	27624
B8	15	100%	9405	10260	4832	1568	24346
A69	15	100%	7804	8107	3448	1020	17856
B57	15	100%	7693	7600	3714	1507	18931
A3	15	100%	7621	8323	3721	1080	19153
A23	15	100%	6000	6446	3417	696	16908
Cw18	15	100%	5885	5912	3337	1296	15556
B59	15	100%	5619	6122	3214	1258	16530
A36	15	100%	5177	5664	2919	751	14210
B58	15	100%	5085	5343	2672	1131	13769
A32	15	100%	5044	5199	3169	702	15059
B49	15	100%	4827	5201	3005	919	14883
B44	15	100%	4614	4746	2234	869	11259
B63	15	100%	4500	4727	2583	937	13073
B76	15	100%	4200	4508	2070	627	10316
B37	15	100%	4096	4270	1895	820	9013
B53	15	100%	3938	4152	2222	830	11058
Cw15	15	100%	3900	4172	2527	677	11547
B38	15	100%	3723	4009	2291	737	10816
B51	15	100%	3232	3450	1690	650	8338
Cw6	15	100%	3182	3441	2006	727	9091
B81	14	93%	14783	13462	4133	3995	19375
A24	14	93%	3899	4626	1839	2624	9824
Cw2	14	93%	3619	3863	2232	680	10348
A25	14	93%	2739	3093	1403	1126	7461
B27	13	86%	13872	12870	4123	3678	18336
B52	12	80%	2376	2764	1608	1150	7869

Class I							
*** Serum 191, cont. ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B52	12	80%	2376	2764	1608	1150	7869
Cw17	12	80%	2331	2514	1215	719	5389
Cw4	11	73%	2731	2782	1419	787	6452
B77	11	73%	1960	2364	1026	1316	5330
Cw5	10	66%	2326	2747	1312	1074	6218
A11	10	66%	1964	2063	519	1388	3205
A43	10	66%	1716	1973	727	1013	3665
B47	10	66%	1670	2117	891	1199	4280

Class II							
*** Serum 191 ***							
14 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR1	14	100%	7910	8428	3599	2912	16714
DR103	14	100%	7766	8422	3697	2778	16905
DR10	14	100%	6384	6851	3240	1742	14193
DR7	14	100%	4225	4786	2331	1684	10183
DR51	14	100%	3258	3428	1425	1000	6500
DR9	13	92%	2407	2952	1405	905	6169
DP9	11	78%	2075	2566	1325	1077	5554
DQ2	9	64%	1741	1923	847	801	3889
DP17	9	64%	1640	2022	849	1180	3847
DPw6	9	64%	1509	1712	653	874	2678
DPw3	7	50%	1617	1667	551	970	2347
DP14	6	42%	1306	1534	653	809	2612
DP20	5	35%	1551	1683	556	1007	2335
DR12	5	35%	1217	1632	777	784	2871
DR52	3	21%	1003	1534	842	877	2723
DQ5	1	7%	525	525	-	525	525
DQA1*01	1	7%	525	525	-	525	525

Blue = DSA against cell #187 only
Gold = DSA against cell #188 only
Green = DSA against cell #187 and #188

Table 15. Summary of Single Antigen results for Serum #192

Class I							
*** Serum 192 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B57	15	100%	11831	12761	6144	1860	28455
B58	15	100%	9257	10153	5022	1617	23752
A2	15	100%	8600	9143	4227	1071	19548
B49	14	93%	3948	4469	2402	1399	10355
B59	14	93%	3675	4309	2255	1405	9865
B53	14	93%	3465	3922	1975	1312	8498
B63	14	93%	3122	3679	1777	1417	7834
B18	14	93%	2931	3401	1788	1019	7892
B44	14	93%	2779	3120	1395	1046	6679
A29	14	93%	2737	3141	1657	790	7541
B38	14	93%	2658	3176	1712	1139	7513
B55	14	93%	2595	2972	1606	778	6820
B51	14	93%	2536	2834	1288	1001	5816
B56	14	93%	2299	2661	1382	706	6084
B62	14	93%	2220	2507	1222	858	5842
B35	14	93%	2192	2425	1140	760	5256
B52	14	93%	2047	2364	1195	867	5240
B13	13	86%	2997	3061	1324	941	6344
B54	13	86%	2500	2818	1362	1069	5961
B46	13	86%	2325	2732	1220	1344	5631
B67	13	86%	2157	2515	1101	1531	5314
B27	12	80%	3056	3187	1206	1488	6724
B71	12	80%	1878	2486	1431	726	5293
B72	12	80%	1877	2316	1347	722	5454
B37	12	80%	1816	2176	1005	710	4793
B77	11	73%	1970	2390	1101	1185	4739
B47	11	73%	1939	2428	1133	1201	5154
B45	10	66%	1623	2055	922	1362	3942
B64	10	66%	1561	1801	869	901	4260
B75	10	66%	1551	1958	740	1208	3801
B65	7	46%	1216	1415	768	694	3141
B76	5	33%	1218	1323	473	677	2138
B78	5	33%	1129	1149	248	745	1417
Bw4	4	26%	11021	9927	5119	2500	15168
A203	4	26%	4226	7921	8339	1071	22164
B2708	4	26%	2452	2856	1589	1106	5417

Class II							
*** Serum 192 ***							
15 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR15	15	100%	22980	23518	8312	3962	45825
DR16	15	100%	22795	22999	8584	3491	46557
DR1	15	100%	20022	20285	7332	3669	40544
DR51	15	100%	17778	18576	6119	2917	32556
DR7	15	100%	14487	15618	6070	2041	32725
DR9	15	100%	12418	12395	4521	1782	22552
DR103	14	93%	20818	22182	6746	15335	43592
DR53	14	93%	10361	10763	3803	3282	20841
DR10	14	93%	7835	8727	3536	3490	18925
DR4	1	6%	1717	1717	-	1717	1717
DR12	1	6%	885	885	-	885	885

Blue = DSA against cell #187 only
Gold = DSA against cell #188 only
Green = DSA against cell #187 and #188

Table 16a. Individual laboratory results for Serum #189 - class I by One Lambda Single Antigen

**** Serum 189 ****																								
Ctr	A1	A26	A29	A36	A43	A80	B35	B42	B49	B50	B53	B55	B56	B62	B67	B71	B72	B75	B77	A30	B63	A2	B46	B54
230	32425	12984	34335	31430	22171	20416	26206	18726	21705	17315	23543	21241	25737	16558	18953	24604	17897	22986	18165	15652	15555	7120	9501	9968
615	16646	7382	20220	15946	9090	7733	10610	7435	8461	7411	8729	10185	11496	7274	7123	9171	6518	11339	7550	9157	5514	2295	3442	3603
792	19141	6378	22919	15953	9202	7571	11231	8112	9538	7076	9576	10923	12648	7932	7325	11293	6939	10897	7190	9380	5428	2462	3142	3533
2400	21128	8373	25535	18562	12049	9186	13016	9211	10012	7867	11745	12629	14845	9510	8382	12198	8216	10327	8063	6681	6725	2295	3778	4264
3632	25261	7546	28869	21949	10799	7430	10008	7302	8100	5925	9034	11062	12103	7183	7961	9643	6050	11104	5777	10050	4568	2065	3078	3416
3753	22213	8804	30722	17901	11913	8912	13412	8050	8788	6444	12858	11661	15562	8122	6493	12349	6804	9799	7554	6998	5835	2104	2412	2792
5130	18938	7821	23284	18263	10610	8993	13247	9168	10348	7588	12407	12089	14079	9218	8330	12546	7894	12713	7570	10520	6658		3439	3585
5214	40695	15459	47283	37265	20332	18017	27691	18595	24207	18531	24258	24673	31585	20401	16350	28296	18618	18071	17255	14381	15093	4810	7358	7344
8001	21360	8161	28082	18575	11505	8701	12534	8340	10644	7874	11963	11370	14623	8816	7802	12705	7720	13262	8075	10769	6371	2505	3836	3368
8083	26026	11330	31437	23735	14664	11811	16420	11851	13639	10648	15201	15211	18733	12102	11100	16224	11050	16820	10766	14028	9099	3852	5696	5338
8103	3293	901	6020	2639	1257	1471	1472	991	1164	845	1403	1709	1912	963	972	1446	775	1786	873	1174				
8111	21700	8600	26000	19500	11700	9200	12500	8500	10600	8100	11000	12000	14500	9000	8600	12400	7400	10000	7300	7200	6800	2000	4000	3800
14262	16459	5291	22533	12584	7765	6687	8876	6113	7197	5531	7779	8783	10665	6255	6274	8781	4959	7070	4551	4225	4075	1219	2500	2351
Avg	21945	8386.9	26711	19562	11774	9702.2	13633	9414.9	11108	8550.4	12269	12580	15268	9487.2	8897.3	13204	8526.2	12013	8514.5	9247.3	7643.4	2975	4349	4447
Std Dev.S	8723.4	3556.4	9318.5	8391.3	5265.2	4842.9	6862.4	4768	5990.4	4709.7	6125.5	5586	7195	4781.1	4521.8	6833.3	4889.6	5209.1	4677.6	4093.4	3805	1684	2132	2169
MFI																								
%CV	40%	42%	35%	43%	45%	50%	50%	51%	54%	55%	50%	44%	47%	50%	51%	52%	57%	43%	55%	44%	50%	57%	49%	49%

Blue = DSA against cell #187 only
 Gold = DSA against cell #188 only
 Green = DSA against cell #187 and #188

Table 16b. Individual laboratory results for Serum #189 - class I by Immucor

**** Serum 189 ****																								
Ctr	A1	A26	A29	A36	A43	A80	B35	B42	B49	B50	B53	B55	B56	B62	B67	B71	B72	B75	B77	A30	B63	A2	B46	B54
3808	10030	2184	13225	10775	2710	1554	3964	1785	3739	3126	3960	2436	3998	2850	1566	3562	2300	3497	3671		2187	700	846	847
8029	11657	4151	14760	11682	5063	3328	6964	3767	5924	5085	6493	5674	6722	5815	3732	5431	4707	5644	6125	1717	4123	1704		
Avg	10844	3167.5	13993	11229	3886.5	2441	5464	2776	4831.5	4105.5	5226.5	4055	5360	4332.5	2649	4496.5	3503.5	4570.5	4898	-	3155	1202	-	-
Std Dev.S	1150.5	1390.9	1085.4	641.35	1663.8	1254.4	2121.3	1401.5	1545	1385.2	1791.1	2289.6	1926.2	2096.6	1531.6	1321.6	1702	1518.2	1735.2	-	1369	710	-	-
MFI																								
%CV	11%	44%	8%	6%	43%	51%	39%	50%	32%	34%	34%	56%	36%	48%	58%	29%	49%	33%	35%	-	43%	59%	-	-

Table 16a. Individual laboratory results for Serum #189 - class I by One Lambda Single Antigen, cont.

**** Serum 189 ****																							
Ctr	B7	B78	B82	Cw9	A74	B51	A33	A69	B57	B58	B81	Cw10	A31	A68	B59	A23	A34	B37	Cw4	A66	B76	Other	
230	10266	7999	9622	11377	6962	12596	6702	7168	4893	5021	7846	6896	6471	6488	6063	4749	5625	4813		4722		B4005,B39,B48	One Lambda
615	2978	2714	2182	3263	2331	8774	2311	1796	1639	1787	2284	1576	2182	1717	1292	1256	2006	1368	1016	1427	1018	B2708,B39,B38,B41,A*24:02 >	One Lambda
792	3057	2557	3052	3294	1870	9785	2034	1572	1983	1729	2022	2045	1742	1635	1882		1728						One Lambda
2400	3194	3648	4013	4655	2178	10215	2338	2517	2531	2293	2647	2557		2158	2626								One Lambda
3632	2431	2684	2335	4088	2154	8062	2367		2203			2046	2112									B4005,B*48:02	One Lambda
3753	2576	1705	2741	2564	1718	11377	1579	1945	1757	1520	1708		1472	1723	1290	1199	1373	1333	2510		1142		One Lambda
5130	3391	2894	3280	4763	2294			2068			2168	2410										A*33:03,A*02:01, A*02:06,A*68:01,B*51:02	One Lambda
5214	7174	6011	6410	8472	4475	13150	3178	3653	3312	3629	4856	4128	4136	3459	4467	2930	2312	2740	2178		2086	B2708,A6601,A6602,B3901 >	One Lambda
8001	3055	2834	2977	4047	2267	10950	2237	2105	1903	1800	2265	2365	1974	1778	1853	1191	1919	1494	1212	1191	1002	B41,B52	One Lambda
8083	4948	4550	4396	6600	3841	14281	3612	3179	2869	2730	3723	3917	3141	2666	2926	2107	3130	2546		2180		B41	One Lambda
8103						1061																B15	One Lambda
8111	3100	3000	3100	4900	2700	5800	2400	1700	2000	1900	2300	2500	2500	1600	2100	1400		1700	1700	1600	1300	B2708,B39,B38,Cw1 >	One Lambda
14262	1892	1866	1673	2970		7183			1666	1145	1142	1642			1029					1532		B*51:02	One Lambda
Avg	4005.2	3539	3815	5082.8	2981	9436.2	2876	2770	2432	2355	2996	2917	2859	2580	2553	2119	2585	2285	1691	2224	1310		
Std Dev.S	2408.8	1829	2206	2578	1564	3628.2	1459	1683	971	1167	1894	1553	1575	1589	1591	1326	1449	1250	569	1443	450		
MFI																							
%CV	60%	52%	58%	51%	52%	38%	51%	61%	40%	50%	63%	53%	55%	62%	62%	63%	56%	55%	34%	65%	34%		

Blue = DSA against cell #187 only
 Gold = DSA against cell #188 only
 Green = DSA against cell #187 and #188

Table 16b. Individual laboratory results for Serum #189 - class I by Immucor, cont.

**** Serum 189 ****																							
Ctr	B7	B78	B82	Cw9	A74	B51	A33	A69	B57	B58	B81	Cw10	A31	A68	B59	A23	A34	B37	Cw4	A66	B76	Other	
3808	748	762	713	816						712												B7801	Immucor
8029				1268			1379	1925					1243	1557		1234	1396					Bw4,Bw6,A24,A203	Immucor
Avg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Std Dev.S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MFI																							
%CV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 17a. Individual laboratory results for Serum #190 - class I by One Lambda Single Antigen

**** Serum 190 ****																								
Ctr	A2	A23	A24	A25	A32	B37	B38	B44	B47	B49	B51	B52	B53	B57	B58	B59	B63	B77	B78	Cw18	Cw6	B13	B35	Cw15
230	10611	27720	24813	26963	30209	18553	23555	12561	6143	28928	25844	23916	23829	27754	23525	27955	25408	17298	6770	8694	10587	8373	5548	7102
615	7848	18444	18108	18420	20106	12461	17432	9275	7170	20502	19204	14641	16199	18971	16892	17571	18486	13966	4081	6123	5779	8444	3715	6570
792	6854	16405	16502	16735	20173	10246	15840	8609	3258	20007	18042	15741	15265	19124	15172	18713	18077	10849	3742	6836	6169	7318	3084	4751
2400	6531	13869	12519	14793	20244	9568	14380	6731	3718	18796	16762	13703	14787	18244	15750	16319	17540	10781	4015	6698	6378	7547	3109	5440
3632	5074	15484	12442	15278	19051	9116	12666	7733	2489	18170	15066	13106	13051	14482	12625	16659	15535	9113	2307	3786	3454	5733		2805
3753	7195	21166	17442	22750	27595	11211	20578	6854	2149	24616	21909	19561	20800	23795	19465	23251	23370	12227	4541	9192	5955	7316	4162	4295
5130	9542	21053	20940	20928	23272	12860	19086	10843	3675	22274	20630	18349	18598	21872	17755	19919	20684	12432	4845	10218	7816		4478	6579
5214	15262	45514	37278	41155	50807	29500	40204	17309	9494	47371	39793	38538	38246	45105	37610	44616	44427	27263	9364	18608	15399	5299	8500	12323
8001	7699	21257	20993	21739	25164	14159	20401	11034	4167	23509	21772	18762	19270	22627	19150	21901	21914	13808	4012	7453	6651	9910	3702	5500
8083	9287	24633	24613	24526	28042	17470	21831	13379	5336	26789	23347	20602	22062	25271	21399	24400	24039	15643	4751	9843	8214	11491	4551	9426
8103	4483	8062	7028	10745	14084	9252	14897	8779	3699	17097	15859	15246	14773	16075	14899	16126	15960	11350	3833	7445	6489	6917	3290	5507
8111	7700	22000	19400	21600	25000	15400	19300	10400	5200	23000	20600	18500	19500	23000	18900	21500	22000	13700	4500	8300	6700	6800	3900	5300
14262	1426	10203	6596	11946	15633	10394	14305	7151	2750	18421	15179	13895	13865	16742	13277	16605	16335	9318	2456	6677	5291	4062	2281	3986
Avg	7655	20447	18360	20583	24568	13861	19575	10051	4558	23806	21077	18812	19250	22543	18955	21964	21829	13673	4555	8451.8	7298.6	7434.2	4193	6121.8
Std Dev.S	3298	9351	8132.3	7848.5	9228	5622.4	7020.3	3042.7	2084	7907.8	6514.4	6718.3	6615.6	7795.7	6417.5	7711.9	7527.6	4716.5	1817	3498.5	2944.2	2000.5	1596	2473.6
MFI																								
%CV	43%	46%	44%	38%	38%	41%	36%	30%	46%	33%	31%	36%	34%	35%	34%	35%	34%	34%	40%	41%	40%	27%	38%	40%

Blue = DSA against cell #187 only
 Gold = DSA against cell #188 only
 Green = DSA against cell #187 and #188

Table 17b. Individual laboratory results for Serum #190 - class I by Immucor

**** Serum 190 ****																								
Ctr	A2	A23	A24	A25	A32	B37	B38	B44	B47	B49	B51	B52	B53	B57	B58	B59	B63	B77	B78	Cw18	Cw6	B13	B35	Cw15
3808	2078	7612	7814	7644	9585	5206	8693	3391	1704	9484	9887	7770	7372	8046	7432	9345	9508	6913	1328	989	963	791	953	
8029	3282	8594	8357	9501	12979	5908	9855	5045	2295	11273	9283	9309	9448	10343	9017	11647	10542	7894	2127	1005	1028	1323	1525	842
Avg																								
Std Dev.S																								
MFI																								
%CV																								

Table 17a. Individual laboratory results for Serum #190 - class I by One Lambda Single Antigen, cont.

**** Serum 190 ****											
Ctr	Cw17	B18	Cw5	Cw2	B27	B2705	B75	A69	A2403	Other	
230	7021	4447			18795			2366		Bw4,B62,Cw16	One Lambda
615	4480	3145	4894	2574		12535	1426	1869		B71,Cw4	One Lambda
792	3362	2594	2905	2220	10707						One Lambda
2400	3636	2721	3573	2903	9953					Bw4	One Lambda
3632						9737			14878	C*16:02,B*15:24	One Lambda
3753	5976	2564	2763	2061	12525		1151				One Lambda
5130	5486	2866	4057	3428						B*27:05,B*13:02	One Lambda
5214	10638	6118	8455	5288		31793	2146		43145		One Lambda
8001	4307	2646	3395	2564		13826	1250	1419		B*27:05,Bw4	One Lambda
8083	6038	3322	4076	3219	16842						One Lambda
8103	5989	2530	4392	3648	11167	11167	1476	1030	7028	B7801,B71,A203,B15 >	One Lambda
8111	5200	3000	3000	3400		15000	1400	1300		Bw4	One Lambda
14262	3533	1358	2871	2130	10385					Bw4,B*27:05	One Lambda
Avg	5472.2	3109	4035	3040	12911	15676	1475	1597	21684		
Std Dev.S	1998.3	1179	1623	930	3494.1	8113	350	526	18996		
MFI											
%CV	37%	38%	40%	31%	27%	52%	24%	33%	88%		

Table 17b. Individual laboratory results for Serum #190 - class I by Immucor, cont.

**** Serum 190 ****											
Ctr	Cw17	B18	Cw5	Cw2	B27	B2705	B75	A69	A2403	Other	
3808	1453				5100	4482			8228	B7801,A203	Immucor
8029	1429	1100	789		6476		509	710	8810	Bw4,Bw6,A203	Immucor
Avg	1441	-	-	-	5788	-	-	-	8519		
Std Dev.S	16.971	-	-	-	972.98	-	-	-	411.54		
MFI											
%CV	1%	-	-	-	17%	-	-	-	5%		

Table 18a. Individual laboratory results for Serum #191 - class I by One Lambda Single Antigen

**** Serum 191 ****																										
Ctr	A1	A2	A23	A3	A32	A36	A69	B37	B38	B42	B44	B49	B51	B53	B54	B55	B56	B57	B58	B59	B63	B67	B7	B73	B76	
230	14274	11976	9002	10212	7825	7419	9131	6878	7163	16838	7036	7244	5011	5783	14596	17016	16001	9277	6339	7607	5913	17484	16772	17110	6560	
615	10981	13335	7175	7002	5186	5969	8503	4598	4444	16897	4836	5380	4237	3938	12759	15725	14159	7693	5902	5593	5121	17184	17880	14575	3945	
792	11974	13189	6225	8233	4368	5982	7273	3823	3410	18586	4614	4827	3330	3682	13582	17748	17109	7328	4949	6202	4279	20025	19251	16743	4609	
2400	12921	14014	6799	9559	5044	6845	10290	4414	3723	19870	4669	5139	3424	4396	14634	18873	17765	7859	5881	6578	5202	20759	20443	17367	5117	
3632	10549	14005	5757	7807	3868	5154	7773	3475	2348	19466	3472	3680	2708	2717	13073	18298	17549	6786	3739	5094	3397	20522	20971	16991	3135	
3753	14978	13143	6317	10118	5460	6557	7804	4052	3774	20057	4926	4632	3054	4359	15059	19510	18002	8503	5672	5619	4133	22791	20425	19635	5993	
5130	10233	9056	5324	7389	5359	4556	6440	3352	3314	12316	4314	4318	3232	3520	10207	12302	10646	6164	3821	4556	3609	13534	11862	12449	3749	
5214	27624	28325	16908	19153	15059	14210	17856	9013	10816	38104	11259	14883	8338	11058	29301	37757	35392	18931	13769	16530	13073	39510	40596	35964	10316	
8001	11306	12244	5990	7621	5202	5177	7927	4096	3854	17611	4557	5165	3525	4297	13196	16818	16328	7695	5085	5780	4656	19547	19078	16002	3750	
8083	14426	16115	8335	10818	6918	7436	11292	5943	4838	22148	6086	6643	4553	5455	15751	20086	20194	9745	6682	7614	5929	22787	22542	19371	5067	
8103	1612	1906	696	1080	702	751	1020	820	737	4384	869	919	650	830	2968	4234	4168	1507	1131	1258	937	4825	4790	3817	627	
8111	10600	11000	6000	7600	4500	5000	7000	4300	3400	17000	4100	4700	2900	3700	12200	16000	15000	7000	4600	5600	4500	17500	17000	15300	4200	
14262	9578	10091	5065	6507	4154	4514	5845	4559	3806	16912	4696	5061	3203	4039	12243	16679	15819	7759	5653	6391	4760	18321	18177	15737	4335	
Avg	12389	12954	6892	8700	5665	6121	8320	4563	4279	18476	5033	5584	3705	4444	13813	17773	16779	8173	5633	6494	5039	19599	19214	17005	4723	
Std Dev.S	5667	5770	3592	3975	3274	2980	3773	1933	2434	7367	2341	3166	1739	2328	5659	7260	6890	3794	2842	3408	2733	7586	7907	6942	2213	
MFI																										
%CV	46%	45%	52%	46%	58%	49%	45%	42%	57%	40%	47%	57%	47%	52%	41%	41%	41%	46%	50%	52%	54%	39%	41%	41%	47%	

Blue = DSA against cell #187 only
 Gold = DSA against cell #188 only
 Green = DSA against cell #187 and #188

Table 18b. Individual laboratory results for Serum #191 - class I by Immucor

**** Serum 191 ****																										
Ctr	A1	A2	A23	A3	A32	A36	A69	B37	B38	B42	B44	B49	B51	B53	B54	B55	B56	B57	B58	B59	B63	B67	B7	B73	B76	
3808	4188	9216	2846	4429	1510	1992	5486	1792	1723	7768	2156	2037	1475	1661	6656	6588	6912	2808	2462	2656	1982	7697	11230	5502	2414	
8029	6013	11685	4262	7323	2844	3410	7965	2939	2787	10810	3601	3391	2115	2847	8845	10277	9933	4957	4465	4766	3424	11652	12844	7644	3805	
Avg	5101	10451	3554	5876	2177	2701	6726	2366	2255	9289	2879	2714	1795	2254	7751	8433	8423	3883	3464	3711	2703	9675	12037	6573	3110	
Std Dev.S	1290	1746	1001	2046	943.3	1003	1753	811.1	752.4	2151	1022	957.4	453	838.6	1548	2609	2136	1520	1416	1492	1020	2797	1141	1515	983.6	
MFI																										
%CV	25%	17%	28%	35%	43%	37%	26%	34%	33%	23%	35%	35%	25%	37%	20%	31%	25%	39%	41%	40%	38%	29%	9%	23%	32%	

Table 18a. Individual laboratory results for Serum #191 - class I by One Lambda Single Antigen, cont.

**** Serum 191 ****																									
Ctr	B8	B82	Cw15	Cw18	Cw6	A24	A25	B81	Cw2	B27	B2708	A80	B52	Cw17	B77	Cw4	A11	A43	B47	Cw5	B13	B45	Other		
230	13700	13260	6336	7660	6328	5453	3906	15277		15388		3280					3205						Bw4,B62,Cw16	One Lambda	
615	9405	9937	5197	5424	3182	6950	3216	15182	4091	12906		2351	2579	2873	2976	2731	2297	1732	3158	3485	1576	1313	A6601,A26,A*68:02	One Lambda	
792	9634	13445	3786	5584	2993	3894	2289	15909	3481	16412		2076	2368	1763	1778	2568	1931	1532	1640	2064				One Lambda	
2400	11714	14654	4409	6335	3403	4870	2925	17785	4179	16402		2780	2404	2661	2188	2841	2462	2312		2427				One Lambda	
3632	9768	14177	2590	3884	2088	3904	3201	14420	2269		15623													B2705,A2403,C*16:02	One Lambda
3753	12385	14293	5334	8075	4281	3296	2412	16302	5397	16485		2545	2229	3476	1869	3308	1996	2612	1569	2993	1507	1476		One Lambda	
5130	9302	8998	1918	5885	3277	3710	2304	10398	3427	10136			2186											One Lambda	
5214	24346	29288	11547	15556	9091	9824	7461		10348		33108	4828	7869	5389	5330	6452		3665	4280	6218	2828	2602	A1101,A1102,B2705, B8101>	One Lambda	
8001	8825	12993	4198	6133	3353	3743	2481	15145	4151	14815		1690	2384	2793	1960	2762	1616	1422	1674	2225	1357		Bw4	One Lambda	
8083	13243	15739	5518	8105	4216	5719	4096	19375	5416	18336		2630	3269	3715	2532	3615	2448	2273	2257	2833				A66	One Lambda
8103	1568	3309	677	1296	727			3995	680	3678	3678			719										B8201,B2705,B8101, A203 >	One Lambda
8111	9200	12300	3700	5400	3000	3600	2900	14300	3500	13000		2000	2300	2000	1800	2300	1700	1700	1500	2000	1100	1100	A6601,A26,Bw4	One Lambda	
14262	9283	13448	3900	5904	2985	2624	2408	14383	3738	13872		1660	2544	1985	1950	2238	1388	1471	1666	2160	1367	1027		One Lambda	
Avg	10952	13526	4547	6557	3763	4799	3300	14373	4223	13766	17470	2584	3013	2737	2487	3202	2116	2080	2218	2934	1623	1504			
Std																									
Dev.S	5013	5739	2610	3245	2044	1989	1443	3912	2309	4028	14802	935	1733	1278	1137	1296	553	729	1001	1327	613	639			
MFI																									
%CV	46%	42%	57%	49%	54%	41%	44%	27%	55%	29%	85%	36%	58%	47%	46%	40%	26%	35%	45%	45%	38%	43%			

Blue = DSA against cell #187 only

Gold = DSA against cell #188 only

Green = DSA against cell #187 and #188

Table 18b. Individual laboratory results for Serum #191 - class I by Immucor, cont.

**** Serum 191 ****																									
Ctr	B8	B82	Cw15	Cw18	Cw6	A24	A25	B81	Cw2	B27	B2708	A80	B52	Cw17	B77	Cw4	A11	A43	B47	Cw5	B13	B45	Other		
3808	4729	7123	1316	1451	1052	2771	1126	7217	1370	7117	8083	875	1150	1288	1316	787			1199					B2705,B703,A28,A68 >	Immucor
8029	6806	10096	2161	2001	1652	4408	2578	8785	2037	8769	11351	1603	1893	1509	2305	1006	1593	1013	2232	1074		975		B703,A26,A68,Bw4 >	Immucor
Avg	5768	8610	1739	1726	1352	3590	1852	8001	1704	7943	9717	1239	1522	1399	1811	897	-	-	1716	-	-	-			
Std																									
Dev.S	1469	2102	597.5	388.9	424	1158	1027	1109	471.6	1168	2311	515	525	156	699	155	-	-	730	-	-	-			
MFI																									
%CV	25%	24%	34%	23%	31%	32%	55%	14%	28%	15%	24%	42%	35%	11%	39%	17%	-	-	43%	-	-	-			

Table 19a. Individual laboratory results for Serum #192 - class I by One Lambda Single Antigen

**** Serum 192 ****																												
Ctr	A2	B57	B58	A29	B18	B35	B38	B44	B49	B51	B52	B53	B55	B56	B59	B62	B63	B13	B46	B54	B67	B27	B37	B71	B72	B47	B77	B45
230	16423	21975	17861	7541	6963	4679	7513	6679	9602	5816	4964	8498	6390	5461	9007	4668	7676	6344	5631	5676	5314	6724	4793	5293	4874	5154	4739	3942
615	6187	8689	7213	1844	2270	1604	2153	1962	2653	2042	1193	2159	1699	1489	2234	1430	2263	2042	1520	1757	1531	2384	1410	1193	1191	2206	1756	1370
792	7623	11745	9116	2674	2778	1929	2519	2840	3896	2632	2041	3240	2489	2182	3889	1981	3061	3026	2185	2258	1925	3329	1814	1854	1829	1906	1850	1531
2400	8873	13006	10390	3267	3265	2239	2933	2922	4175	2744	2287	3727	2813	2470	4276	2314	3658	3396	2634	2508	2450	2964						
3632	9816	11560	8296	2182	2322	2144	2291	2716	3470	2471	2044	2797	2131	2129	3251	2024	2562	2417	2236		2246	3130	2134	3691				
3753	9837	16515	12636	4573	3493	2467	3071	2541	4072	2469	2175	4524	3205	2794	4676	2473	3719	3558	2537	3040	1595	3112	1622	1901	1924	1915	1970	1714
5130	9687	12973	9611	3349	2967	2302	2757	2999	4004	2609	2049	3748	2718	2407	3649	2316	3182		2325	2545	2157	3781			2056			
5214	19548	28455	23752	4992	7892	5256	6823	5743	10355	5665	5240	8127	6820	6084	9865	5842	7834	4691	5196	5961	4522		3143	5289	5454	4277	4549	3760
8001	8044	11781	9257	2667	2895	1956	2558	2718	3794	2377	1813	3430	2402	2191	3592	2001	3029	2997	2151	2183	1933	3304	1818	1787	1750	1863	1791	1503
8083	11200	15168	11706	3809	3848	2773	3366	3694	4978	3257	2528	4490	3265	2932	4458	2670	3923	3794	3025	2806	2871		2888	2521	2461	2436	2396	2085
8103	1071	1860	1617																									
8111	8600	12400	9600	2800	3200	2300	2800	2900	4000	2600	2300	3500	2700	2500	3700	2300	3500	2600	2500	2500	2500	3000	2400	2200	2100	2100	2100	1800
14262	8308	11831	8947	2246	2849	1943	2463	2546	3592	2249	1910	2898	2331	2142	3452	2140	3018	2088	2233	2191	2081	2390	1730	1804	1645	1712	1815	1484
Avg	9632	13689	10769	3495	3729	2633	3437	3355	4882.6	3078	2545	4262	3247	2898	4671	2680	3952	3359	2848	3039	2594	3412	2375	2753	2528	2619	2552	2132
Std Dev.S	4492	6323.5	5298.8	1590	1794	1137	1780	1405	2444.4	1278	1239	2007	1629	1397	2320	1266	1838	1264	1253	1417	1160	1237	1016	1488	1434	1227	1203	998
MFI																												
%CV	47%	46%	49%	45%	48%	43%	52%	42%	50%	42%	49%	47%	50%	48%	50%	47%	47%	38%	44%	47%	45%	36%	43%	54%	57%	47%	47%	47%

Blue = DSA against cell #187 only
 Gold = DSA against cell #188 only
 Green = DSA against cell #187 and #188

Table 19b. Individual laboratory results for Serum #192 - class I by Immucor

**** Serum 192 ****																												
Ctr	A2	B57	B58	A29	B18	B35	B38	B44	B49	B51	B52	B53	B55	B56	B59	B62	B63	B13	B46	B54	B67	B27	B37	B71	B72	B47	B77	B45
3808	4824	5593	4670	790	1019	760	1139	1046	1399	1001	867	1312	778	706	1405	858	1417	941		1069		1488	710	726	722	1201	1185	
8029	7104	7873	7636	1247	1865	1601	2088	2374	2587	1749	1689	2466	1876	1776	2883	2083	2669	1902	1344	2147	1575	2643	1651	1577	1791	1939	2147	1362
Avg	5964	6733	6153	1019	1442	1181	1614	1710	1993	1375	1278	1889	1327	1241	2144	1471	2043	1422	-	1608	-	2066	1181	1152	1257	1570	1666	-
Std Dev.S	1612	1612.2	2097.3	323	598	595	671	939	840.04	529	581	816	776	757	1045	866	885	680	-	762	-	817	665	602	756	522	680	-
MFI																												
%CV	27%	24%	34%	32%	41%	50%	42%	55%	42%	38%	45%	43%	59%	61%	49%	59%	43%	48%	-	47%	-	40%	56%	52%	60%	33%	41%	-

Table 19a. Individual laboratory results for Serum #192 - class I by One Lambda Single Antigen, cont.

**** Serum 192 ****							
Ctr	B64	B75	B65	B76	B78	Other	
230		3801				Bw4,B48	One Lambda
615	1272	1208	694	677	745	B39,B50	One Lambda
792	1524						One Lambda
2400							One Lambda
3632		2262				B39,B*48:02	One Lambda
3753	1586	1580					One Lambda
5130							One Lambda
5214	4260	2528	3141	2138		B2708,B7801,B3901,B2705 >	One Lambda
8001	1430	1521	1146		1055	Bw4	One Lambda
8083	2058	2239				B2708,B2705,Bw4	One Lambda
8103						A203	One Lambda
8111	1700	1500	1500	1400	1400	B39,Bw4,B50	One Lambda
14262	1536	1502	1216	1183	1129	B39	One Lambda
Avg	1921	2016	1539	1350	1082		
Std							
Dev.S	972	804	941	607	269		
MFI							
%CV	51%	40%	61%	45%	25%		

Blue = DSA against cell #187 only

Gold = DSA against cell #188 only

Green = DSA against cell #187 and #188

Table 19b. Individual laboratory results for Serum #192 - class I by Immucor, cont.

**** Serum 192 ****							
Ctr	B64	B75	B65	B76	B78	Other	
3808	901		707			B2708,B2705,B82,A203	Immucor
8029	1751	1442	1501	1218	1417	B2708,B3901,B82,Bw4 >	Immucor
Avg	1326	-	1104	-	-		
Std							
Dev.S	601	-	561	-	-		
MFI							
%CV	45%	-	51%	-	-		

Table 20a. Individual laboratory results for Serum #189 - class II by One Lambda Single Antigen

**** Serum 189 ****															
Ctr	DR11	DR12	DR13	DR14	DR17	DR53	DR8	DR9	DR18	DR52	DR10	DR7	DQ5	DQ2	Other
230	10516	5226	9946	10168	8094	5934	6436	6081	8244	3333	5145				One Lambda
615	7948	3515	8442	10959	5380	4632	5987	6722	6040	3954	3705	1436	2340	1953	DQ9,DQ6,DQB1*05:02,DQB1*06:02,DQB1*06:04
792	9146	3626	8947	11113	5951	4364	6118	7484	6725	3838	3422	1688	3868	2398	DQ6
2400	8088	3713	8265	9725	6071	4244	6395	8423	6594	3310	3605		2580		One Lambda
3632	6188	2888	7046	9336	4209	3548	4649	7864	4827	3172	2875		2990		DR1403,DR1404
3753	7769	3535	8213	9847	5755	4250	5926	6235	6215	2571	3156	1088			One Lambda
5130	7236	3160	7392	9951	4900	4133	5365	5780	5404		3139				DRB3*03:01
5214	14514	6795	14715	12065	11250	8022	12820	16130	12041	3943	7290	2895		1877	One Lambda
8001	6754	2802	7494	9887	4675	3545	4841	6840	5334	3072	2667	1085	1445	1067	DQB1*02:01,DQB1*05:02
8083	7502	3482	8224	11201	5138	4508	5862	8509	5676	3683	3428				One Lambda
8103	2073	991	2158	3056	1423	947	1348	1859		909			840		DR3
8111	6200	3000	6500	8000	4400	3600	5200	3700	5000	2300	3000	1200			One Lambda
14262	3896	1789	4193	5696	2767	3063	3041	4554	3083	1213	2159				One Lambda
Avg	7525	3425	7810.4	9308	5385.6	4215	5691.4	6937	6265.3	2942	3633	1565	2344	1824	
Std Dev.S	3001	1422	2916.6	2465.9	2386.9	1608	2586.3	3353	2203.3	1018	1359	692	1083	554	
MFI															
%CV	40%	42%	37%	26%	44%	38%	45%	48%	35%	35%	37%	44%	46%	30%	

Blue = DSA against cell #187 only

Gold = DSA against cell #188 only

Green = DSA against cell #187 and #188

Table 20b. Individual laboratory results for Serum #189 - class II by Immucor

**** Serum 189 ****															
Ctr	DR11	DR12	DR13	DR14	DR17	DR53	DR8	DR9	DR18	DR52	DR10	DR7	DQ5	DQ2	Other
3808	2430	929	2334	3343	1820	973	1507	1146	2220	982					DR1403,DR1404
8029	3917	1806	3838	5006	3005	1847	2900	2246	3878	1890	1096	644			DR1403,DR1404
Avg	3174	1368	3086	4174.5	2412.5	1410	2203.5	1696	3049	1436	-	-	-	-	
Std Dev.S	1051	620.1	1063.5	1175.9	837.92	618	985	777.82	1172.4	642.1	-	-	-	-	
MFI															
%CV	33%	45%	34%	28%	35%	44%	45%	46%	38%	45%	-	-	-	-	

Table 21a. Individual laboratory results for Serum #190 - class II by One Lambda Single Antigen

**** Serum 190 ****																			
Ctr	DQ4	DQ5	DQ6	DR103	DR11	DR12	DR14	DR15	DR16	DR17	DR52	DR7	DR8	DR13	DR18	DR4	DR51	DQA1*01	Other
230	13421	24007	27927	23128	21831	20351	19011	9560	20085	23573	17104	6777	19055	28399	22191	20859	20047	26888	
615	11978	21944	23735	16566	16879	15050	15745	7319	14054	16677	14374	4471	16846	23091	15659	14963	14872		DR1,DQA1*05,DPw1,DPw2,DRB5*01:01,DRB1*04:02>
792	9282	19855	22932	13940	14562	12690	15975	5929	12344	16594	13520	3223	14922	22516	15745	12621	11715		
2400	6425	18422	20333	13448	13043	12053	15744	5322	11188	16321	11222	3375	14842	21261	15951	11447	10398		
3632	10637	22768	27459	15485	14541	12879	15809	5063	12845	17029	13504	3010	15037	25546	16020				DRB1*04:02,DRB5*01:01,DRB5*01:02
3753	9774	24264	26423	17720	17086	15410	19305	6481	15303	21390	13735	3740	17535	27572	20467				
5130	8980	19895	22551	14570	13854	12818	15290	5926	12801	16072	13504	3822	15026	21723	15046				DQA1*01:03,DQA1*01:01,DQA1*01:02,DRB1*04:02,DRB5*01:01
5214	15718	51864	43588	38215	34893	32824	34838	13825	32513	38628	22594	11202	36788	48153	35703				DQA1*05,DP18
8001	11824	22962	25674	16290	16271	15151	17634	6374	14424	17789	14243	3916	16624	25577	17121	15348	14467		DRB1*04:02 DRB5*01:01
8083	12442	24437	28418	17297	16785	15046	17273	6341	14968	18041	14621	4082	17332		17623	15433	15010		DP13
8103	5321	10437	11941	6275	6716	6880	6543	2145	5901	6850	5332	2061	7293	10234		5795	5009	11941	DR3,DQ3
8111	9100	22000	23700	16700	16700	15300	17600	6600	14800	18500	13000	4300	17600	25000	18200				
14262	6726	15842	17978	13550	10464	9929	10568	3060	9694	11913	7721	3179	11579	18037	11540	11465	10592		DRB1*04:02, DRB5*01:01
Avg	10125	22977	24820	17168	16433	15106	17026	6457	14686	18414	13421	4397	16960	24759	18439	13491	12764	19414.5	
Std Dev.S	2967	9529	7240	7336	6621	6201	6375	2867	6289	7296	4121	2316	6690	8817	6067	4342	4424	10569.1	
MFI																			
%CV	29%	41%	29%	43%	40%	41%	37%	44%	43%	40%	31%	53%	39%	36%	33%	32%	35%	54%	

Blue = DSA against cell #187 only

Gold = DSA against cell #188 only

Green = DSA against cell #187 and #188

Table 21b. Individual laboratory results for Serum #190 - class II by Immucor

**** Serum 190 ****																			
Ctr	DQ4	DQ5	DQ6	DR103	DR11	DR12	DR14	DR15	DR16	DR17	DR52	DR7	DR8	DR13	DR18	DR4	DR51	DQA1*01	Other
3808	2659	6895	9447	6800	9576	6101	7348	2076	5518	8530	5677	1329	6696	12592	8790	6893	4101	9447	DR1403,DR1404
8029	3740	9136	11820	9759	11765	9374	9615	3873	7883	9974	7699	2383	9989	15423	10780	10194	7079	11820	DR1,DR1403,DR1404
Avg	3200	8016	10634	8280	10671	7738	8482	2975	6701	9252	6688	1856	8343	14008	9785	8544	5590	10634	
Std Dev.S	764.4	1585	1678	2092	1548	2314	1603	1271	1672	1021	1430	745.3	2329	2002	1407	2334	2106	1678	
MFI																			
%CV	24%	20%	16%	25%	15%	30%	19%	43%	25%	11%	21%	40%	28%	14%	14%	27%	38%	16%	

Table 22a. Individual laboratory results for Serum #191 - class II by One Lambda Single Antigen

**** Serum 191 ****																
Ctr	DR1	DR10	DR103	DR51	DR7	DR9	DP9	DP17	DPw6	DQ2	DPw3	DP14	DP20	DR12		
230	14947	12714	15341	6500	10183	6169	5554			3889				2871	DR52	One Lambda
615	7890	6447	7834	3752	4339	2848	2075	1862	1772	1985	1617	1511	1551	1101	DR52 , DRB3*03:01, DRB3*01:01	One Lambda
792	8089	6399	7814	3609	4212	2469	1867	1640	1509	1741						One Lambda
2400	10019	8821	10497	4538	6027	3958	2802	2674	2513	2552	2230					One Lambda
3632	6488	5163	6633	2391	3038										C*16:02	One Lambda
3753	8336	6369	7869	2862	4681	2406				1574				1217		One Lambda
5130	7930	6506	7718	3538	4237	2407	2701									One Lambda
5214	16714	14193	16905	4973	9262	4981	4524	3847	2678	2112	2347	2612	2326	2187		One Lambda
8001	7361	5857	7237	2978	3646	2212	1573	1405	1239	1456	1090	1005	1007		DPB1*03:01 DPB1*06:01 DPB1*09:01 DPB1*14:01 DPB1*17:01 DPB1*20:01	One Lambda
8083	10447	8495	10250	5152	6213	4159	3045	2823	2509		2221	2169	2335			One Lambda
8103																One Lambda
8111	7200	5900	7100	2700	3800	2300	1700	1500	1300	1200	1200	1100	1200			One Lambda
14262	4475	3896	5335	1702	2830	1678	1312	1180	1016						DQA1*05	One Lambda
Avg	9158	7563.3	9211.1	3725	5205.7	3235	2715	2116	1817	2064	1784	1679	1684	1844		
Std Dev.S	3491.1	3059.5	3534.4	1356	2347.5	1396	1370	914.9	659.5	848	558.1	694.3	621.7	840.1		
MFI																
%CV	38%	40%	38%	36%	45%	43%	50%	43%	36%	41%	31%	41%	37%	46%		

Blue = DSA against cell #187 only

Gold = DSA against cell #188 only

Green = DSA against cell #187 and #188

Table 22b. Individual laboratory results for Serum #191 - class II by Immucor

**** Serum 191 ****																
Ctr	DR1	DR10	DR103	DR51	DR7	DR9	DP9	DP17	DPw6	DQ2	DPw3	DP14	DP20	DR12		
3808	2912	1742	2778	1000	1684	905										Immucor
8029	5190	3419	4599	2306	2861	1896	1077	1275	874	801	970	809		784	DQ5, DR52 ,DQA1*01	Immucor
Avg	4051	2580.5	3688.5	1653	2272.5	1401	-	-	-	-	-	-	-	-	-	
Std Dev.S	1610.8	1185.8	1287.6	923.5	832.26	701	-	-	-	-	-	-	-	-	-	
MFI																
%CV	40%	46%	35%	56%	37%	50%	-	-	-	-	-	-	-	-	-	

Table 23a. Individual laboratory results for Serum #192 - class II by One Lambda Single Antigen

**** Serum 192 ****											
Ctr	DR1	DR15	DR16	DR51	DR7	DR9	DR10	DR103	DR53	Other	
230	26323	28249	28295	22649	21817	18545	12993	26851	15136		One Lambda
615	16371	19378	18276	16640	12422	11180	6907	17032	9363		One Lambda
792	19393	22980	21544	19375	14487	13105	8696	20001	10525		One Lambda
2400	20697	23626	22994	19048	16680	14250	10095	22520	11760		One Lambda
3632	23796	28888	27648	23359	17030	13582	7196	25157	11330		One Lambda
3753	21280	26839	26945	17778	16568	12418	9928	20869	10533		One Lambda
5130	17529	18926	18735	17234	12984	11726	7969	17224	10101		One Lambda
5214	40544	45825	46557	32556	32725	22552	18925	43592	20841		One Lambda
8001	20829	24344	22795	20576	13997	12451	7222	20767	9669		One Lambda
8083	22729	26952	26532	23752	17031	14874	8372	23809	11880		One Lambda
8103	3669	3962	3491	2917	2041	1782					One Lambda
8111	19000	22000	23000	16000	14000	11000	7700	19500	9500		One Lambda
14262	20022	22728	21882	17729	14825	11239	7075	21271	10196	DQA1*05	One Lambda
Avg	20937	24207	23746	19201	15893	12977	9423.2	23216	11736		
Std Dev.S	7972	9083.1	9353.7	6584.2	6737.7	4707.5	3465.4	7049	3268.4		
MFI											
%CV	38%	38%	39%	34%	42%	36%	37%	30%	28%		

Blue = DSA against cell #187 only

Gold = DSA against cell #188 only

Green = DSA against cell #187 and #188

Table 23b. Individual laboratory results for Serum #192 - class II by Immucor

**** Serum 192 ****											
Ctr	DR1	DR15	DR16	DR51	DR7	DR9	DR10	DR103	DR53	Other	
3808	14993	19186	18911	13232	13304	6662	3490	15335	3282		Immucor
8029	17102	18900	17394	15796	14365	10567	5618	16626	6567	DR4,DR12	Immucor
Avg	16048	19043	18153	14514	13835	8614.5	4554	15981	4924.5		
Std Dev.S	1491.3	202.23	1072.7	1813	750.24	2761.3	1504.7	912.87	2322.8		
MFI											
%CV	9%	1%	6%	12%	5%	32%	33%	6%	47%		

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Table 24. Individual Virtual crossmatch results for Serum #191 vs Donor# V1

Donor #V1 HLA: A*02:07:01-A*24:02:01-B*46:01:01-B*48:01:01-C*01:02:01-C*08:01:01/DRB1*11:01:01-DRB1*15:01:01G-DRB3*02:02:01-DRB5*01:01:01G-DQA1*01:02:01-DQA1*05:05:01-DQB1*03:01:01G-DQB1*06:02:01G-DPA1*02:01:01-DPA1*02:02:02-DPB1*05:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	191	51	Positive	A24 (5453) A2 (11976)	Positive	DR51 (6500)	
792	191	99.71	Positive	A24 (3664) A2 (13189)	Positive	DR51 (3609)	
1461	191	59	Positive	A24 (2720) A2 (7974)	Positive	DR51 (794)	
2400	191	100	Positive	A24 (4669) A2 (14389)	Positive	DR51 (5101) DP14 (1956)	
3632	191	99	Positive	A24 (3904) A2 (13310)	Positive	DR51 (2931)	DSA to A2 and A24. DSA to DR51.
3753	191	100	Positive	A24 (3296) A2 (13143)	Positive	DR51 (2862)	Supplemental testing was used to confirm the donor's specific reactivity to A*02:07
3808	191		Positive	A24 (2771) A2 (9216)	Positive	DR53 (1000)	Unacceptable. weak Class II but strong Class I DSA present
3966	191	100%	Positive	A24 (4850) A2 (17128)	Positive	DR51 (2433) DP14 (1251)	No bead A*02:07 in SAB PANEL. Unacceptable
5130	191	99.74	Positive	A24 (2847)	Positive	DR15 (230) DR51 (3538) DP14 (1290) DPA1*02 (2058)	
8001	191	100	Positive	A24 (3265) A2 (12244)	Positive	DR51 (2978) DP14 (1005)	
8029	191	60	Positive	A24 (4408)	Positive	DR51 (2306) DP17 (1275) DP14 (809)	A*02:07 is not covered in lifecodes Class I beads. DQA1*05:05 is not covered in lifecodes Class II beads.
8080	191	100	Positive	A24 (3582) A2 (8948)	Positive	DR51 (3533)	
8083	191	99.5	Positive	A24 (5281) A2 (16115)	Positive	DR51 (5152) DP14 (2169)	No bead for A*02:07 used A*02:01. DSA to class I antibodies.
8103	191		-		-		
8110	191	99.9047	Positive	A24 (5205) A2 (16592)	Positive	DR51 (4728)	
14262	191	100%	Positive	A24 (2509) A2 (6975)	Positive	DR51 (2119)	

Table 25. Individual Virtual crossmatch results for Serum #191 vs Donor# V2

Donor #V2 HLA: 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

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	191	51	Positive	A2 (11976)	Positive	DR7 (10183)	
792	191	99.71	Positive	A2 (13189)	Positive	DR7 (4212) DP17 (1640)	DPB1*131:01 is DPB1*17:01P
1461	191	59	Positive	A2 (7974)	Positive	DR7 (1181)	
2400	191	100	Positive	Cw8 (2295) A2 (14389)	Positive	DR7 (5932) DQ2 (2032) DP17 (2547)	
3632	191	99	Positive	A2 (13263)	Positive	DR7 (3038)	DSA to A2 and DR7. DSA to A2 and
3753	191	100	Positive	A2 (13143)	Positive	DR7 (4681) DQ2 (1574)	
3808	191		Positive	A2 (9216)	Positive	DR7 (1684)	unacceptable
3966	191	100%	Positive	A2 (17128)	Positive	DR7 (4065) DQ2 (1326) DP17 (1678)	Unacceptable
5130	191	99.74	Positive	A2 (8442)	Positive	DR7 (4237) DQ2 (2128) DPA1*02 (2058) DQA1*02 (1062) DQA1*04 (1171)	
8001	191	100	Positive	A2 (11728)	Positive	DR7 (3646) DQ2 (1456)	
8029	191	60	Positive	A2 (11685)	Positive	DQ2 (801) DR51 (2861) DP17 (1275)	B*39:06 is not covered in lifecodes Class I beads. DPB1*10:01, DPB1*131:01 and DRB4*01:03 are not covered in lifecodes Class II beads.
8080	191	100	Positive	A2 (11987)	Positive	DR7 (4087) DP17 (1788)	Donors DPB1*131:01 part of DP17
8083	191	99.5	Positive	A2 (16115)	Positive	DR7 (6213) DQ2 (3152)	DSA to class I antibodies
8103	191	40	Positive	A2 (1906)	Negative	No class II DSA	high MFI
8110	191	99.9047	Positive	A2 (16592)	Positive	DR7 (8016) DQ2 (2538)	
14262	191	100%	Positive	A2 (10409)	Positive	DR7 (2830) DP17 (1180)	

Table 26. Individual Virtual crossmatch results for Serum #191 vs Donor# V3

Donor #V3 HLA: A*11:01:01-A*34:01:01-B*40:01:02-B*40:02:01-C*04:82:01-C*15:02:01G/DRB1*09:01:02G-DRB1*15:02:01G-DRB4*01:01:01G-DRB5*01:01:01G-DQA1*01:01:01-DQA1*03:02:01-DQB1*03:03:02G-DQB1*05:01:01G-DPA1*02:01:01-DPA1*02:02:02G-DPB1*05:01:01G-DPB1*31:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	191	51	Positive	Cw15 (6336) A2 (3205)	Positive	DR9 (6169) DR51 (6500)	
792	191	99.71	Positive	Cw15 (3786) A11 (1849) Cw4 (2568)	Positive	DR9 (2469) DR51 (3609)	
1461	191	59	Positive	Cw15 (1201) A11 (706) Cw4 (673)	Positive	DR9 (653) DR51 (794)	
2400	191	100	Positive	Cw15 (4174) A11 (2296) Cw4 (2704)	Positive	DR9 (3850) DR51 (5101)	
3632	191	99	Positive	Cw15 (2590) A11 (1619)	Positive	DR9 (1921)	A11 and DR9 were repeated mismatch from pregnancy. The MFIs were relatively low, but still considered high risk. DR9 is a repeated mismatch from previous pregnancy.
3753	191	100	Positive	Cw15 (5334) A11 (1996) Cw4 (3308)	Positive	DR9 (2406) DR51 (2862)	Patient's antibodies to Cw*04:01 shares homology with Cw*04:82 of the donor.
3808	191		Negative	No class I DSA	Positive	DR9 (905) DR51 (1000)	Unacceptable due to Class II DSA
3966	191	100%	Positive	Cw15 (4643) A11 (2660) Cw4 (3341)	Positive	DR9 (2129) DR51 (2433)	No bead C*04:82 in SAB PANEL. Una
5130	191	99.74	Positive	A1101 (1920) Cw15 (3918)	Positive	DR51 (3538) DPA1*02 (2058)	
8001	191	100	Positive	A1101 (1529) Cw15 (4198) Cw4 (2762)	Positive	DR9 (2212) DR51 (2978)	
8029	191	60	Positive	Cw15 (2161) A11 (1593)	Positive	DR9 (1896) DQ2 (504) DQ5 (525) DR51 (2306) DP17 (1275)	A*34:01 and C*04:82 are not covered in lifecodes Class I beads. DPB1*31:01 is not covered in lifecodes Class II beads
8080	191	100	Positive	Cw15 (3833) A11 (1819) Cw4 (2314)	Positive	DR9 (2551) DR51 (3533)	
8083	191	99.5	Borderline	A11 (2257) Cw4 (3615)	Positive	DR9 (5159) DR51 (5152)	No bead for C*04:82 used bead C*04:01
8103	191	40	Negative	Cw15 (677)	Negative	No DSA	low ab MFI
8110	191	99.9047	Positive	Cw15 (7285) A11 (3062) Cw4 (7209)	Positive	DR9 (4304) DR51 (4728)	
14262	191	100%	Positive	Cw15 (3900) A11 (1324) Cw4 (2238)	Positive	DR9 (1976) DR51 (2119)	

Table 27. Individual Virtual crossmatch results for Serum #192 vs Donor# V1

Donor #V1 HLA: A*02:07:01-A*24:02:01-B*46:01:01-B*48:01:01-C*01:02:01-C*08:01:01/DRB1*11:01:01-DRB1*15:01:01G-DRB3*02:02:01-DRB5*01:01:01G-DQA1*01:02:01-DQA1*05:05:01-DQB1*03:01:01G-DQB1*06:02:01G-DPA1*02:01:01-DPA1*02:02:02-DPB1*05:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	192	48	Positive	B46 (5631) A2 (16423) B48 (4294)	Positive	DR15 (28249) DR51 (22649)	
792	192	95.95	Positive	B46 (2185) A2 (7623)	Positive	DR15 (22980) DR51 (19375)	
1461	192	36	Positive	B46 (536) A2 (3873)	Positive	DR15 (15311) DR51 (10371)	
2400	192	98	Positive	B46 (2410) A2 (7907)	Positive	DR15 (24801) DR51 (22008)	
3632	192	96	Positive	B46 (2236) A2 (8531)	Positive	DR15 (28888) DR51 (23359)	DSA to A2 and B46. DSA to DR15 and DR51.
3753	192	98	Positive	B46 (2537) A2 (9837)	Positive	DR15 (26839) DR51 (17778)	The supplemental testing was used to confirm the donor's specific reactivity to A*02:07
3808	192		Positive	A2 (4824)	Positive	DR15 (18801) DR51 (13232)	Unacceptable
3966	192	98%	Positive	B46 (2754) A2 (9110)	Positive	DR15 (21888) DR51 (15826)	No bead A*02:07 in SAB PANEL. Unacceptable
5130	192	97.69	Positive	B46 (2325)	Positive	DQA1*05 (278) DR15 (18926) DR51 (17234) DQ7 (305)	
8001	192	98	Positive	B46 (2151) A2 (8044)	Positive	DR15 (24344) DR51 (20576)	
8029	192	34	Positive	B46 (1344)	Positive	DR15 (18311) DR51 (15796)	A*02:07 is not covered in lifecodes Class I beads. DQA1*05:05 is not covered in lifecodes Class II beads.
8080	192	98	Positive	B46 (2041) A2 (6052)	Positive	DR15 (23603) DR51 (19542)	
8083	192	98	Positive	B46 (3025) A2 (11200)	Positive	DR15 (26952) DR51 (23752)	No bead for A*02:07 used A*02:03. DSA to class I antibodies
8103	192	6	Negative	No class I DSA	Positive	DR15 (3962) DR51 (2917)	No DSA. High MFI
8110	192	98.1321	Positive	B46 (2721) A2 (11217)	Positive	DR15 (24526) DR51 (19304)	
14262	192	100%	Positive	B46 (2233) A2 (5074)	Positive	DR15 (24125) DR51 (20635)	

Table 28. Individual Virtual crossmatch results for Serum #192 vs Donor# V2

Donor #V2 HLA: 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

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	192	48	Positive	B39 (2302) A2 (16423)	Positive	DR7 (21817) DR53 (15136)	
792	192	95.95	Positive	A2 (7623)	Positive	DR7 (14487) DR53 (9099)	
1461	192	36	Positive	B14 (550) A2 (2977)	Positive	DR4 (2158) DR7 (10390)	
2400	192	98	Positive	B65 (1251) A2 (7907)	Positive	DR7 (16511) DR53 (12498)	
3632	192	96	Positive	B39 (2596) A2 (8788)	Positive	DR7 (17030) DR53 (11330)	DSA to DR7, DR53, A2 and B39.
3753	192	98	Positive	A2 (9837)	Positive	DR7 (16568) DR53 (10533)	
3808	192		Positive	B65 (707) A2 (3570)	Positive	DR7 (13304) DR53 (3282)	Unacceptable
3966	192	98%	Positive	B65 (1744) B39 (1451) A2 (9110)	Positive	DR7 (13992) DR53 (8168)	No bead B*39:06 in SAB PANEL. Unacceptable
5130	192	97.69	Positive	A2 (8257)	Positive	DR7 (12984) DQ2 (1272) DR53 (10101) DQA1*02 (282)	
8001	192	98	Positive	B65 (1146) A2 (7075)	Positive	DR7 (13997) DR53 (9669)	
8029	192	34	Positive	B65 (1501) A2 (5202)	Positive	DR7 (14365)	B*39:06 is not covered in lifecodes Class I beads. DPB1*10:01, DPB1*131:01 and DRB4*01:03 are not covered in lifecodes Class II beads.
8080	192	98	Positive	A2 (7434)	Positive	DR7 (14591) DR53 (10613)	
8083	192	98	Positive	B65 (1603) A2 (9926)	Positive	DR7 (17031) DR53 (11880)	DSA to class I antibodies
8103	192	6	Borderline	A2 (1000)	Positive	DR7 (2041)	class low ab MFI; class II high MFI
8110	192	98.1321	Positive	A2 (11217)	Positive	DR7 (16511) DR53 (13750)	
14262	192	100%	Positive	B65 (1216) B39 (1521) A2 (7943)	Positive	DR7 (14825) DR53 (11030)	

Table 29. Individual Virtual crossmatch results for Serum #192 vs Donor# V3

Donor #V3 HLA: A*11:01:01-A*34:01:01-B*40:01:02-B*40:02:01-C*04:82:01-C*15:02:01G/DRB1*09:01:02G-DRB1*15:02:01G-DRB4*01:01:01G-DRB5*01:01:01G-DQA1*01:01:01-DQA1*03:02:01-DQB1*03:03:02G-DQB1*05:01:01G-DPA1*02:01:01-DPA1*02:02:02G-DPB1*05:01:01G-DPB1*31:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Comments
230	192	48	Negative	No class I DSA	Positive	DR9 (18545) DR15 (28249) DR51 (22649) DR53 (15136)	
792	192	95.95	Negative	No class I DSA	Positive	DR9 (13105) DR15 (20475) DR51 (14409) DR53 (10525)	
1461	192	36	Negative	No class I DSA	Positive	DR9 (4807) DR15 (15235) DR51 (10371) DR53 (2158)	
2400	192	98	Negative	No class I DSA	Positive	DR9 (13181) DR15 (22424) DR51 (22008) DR53 (10406)	
3632	192	96	Negative	No class I DSA	Positive	DR9 (11517) DR15 (25704) DR53 (9471)	DSA to DR15, DR9, and DR53.
3753	192	98	Negative	No class I DSA	Positive	DR9 (12418) DR15 (26839) DR51 (17778) DR53 (10533)	
3808	192		Negative	No class I DSA	Positive	DR9 (6662) DR15 (19186) DR51 (13232) DR53 (3282)	Unacceptable due to Class II DSA
3966	192	98%	Negative	No class I DSA	Positive	DR9 (11064) DR15 (21888) DR51 (15826) DR53 (8168)	Unacceptable
5130	192	97.69	Negative	No class I DSA	Negative	DR15 (17108) DR51 (17234) DR53 (8788)	
8001	192	98	Negative	No class I DSA	Positive	DR9 (9771) DR15 (22037) DR51 (20576) DR53 (8384)	
8029	192	34	Positive	No class I DSA	Positive	DR9 (10567) DR15 (18900) DR51 (15796) DR53 (6567)	A*34:01 and C*04:82 are not covered in lifecodes Class I beads; DPB1*31:01 is not covered in lifecodes Class II beads
8080	192	98	Negative	No class I DSA	Positive	DR9 (10351) DR15 (21110) DR51 (19542) DR53 (10613)	
8083	192	98	Negative	No class I DSA	Positive	DR9 (12361) DR15 (24553) DR51 (23752) DR53 (10060)	
8103	192	6	Negative	No class I DSA	Positive	DR15 (3962) DR51 (2917)	high MFI
8110	192	98.1321	Negative	No class I DSA	Positive	DR9 (14748) DR15 (24526) DR51 (19304) DR53 (13750)	
14262	192	100%	Negative	No class I DSA	Positive	DR9 (10560) DR15 (21338) DR51 (20635) DR53 (9361)	

Table 30. Individual Cutoff values and Pretreatment - Exchange 32

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment	
230	A	4000	DRB1	4000	One Lambda	Single Antigen, EXPLEX	None	
	B	4000	DRB3/4/5	4000				
	C	10000	DQA1	4000				
	Class I			DQB1				4000
				DPB1				10000
				Class II				
615	A		DRB1		One Lambda	Single Antigen	EDTA	
	B		DRB3/4/5					
	C		DQA1					
	Class I	500	DQB1					
			DPB1					
			Class II	500				
792	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	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				
3632	A	2000	DRB1	2000	One Lambda	Single Antigen, EXPLEX	EDTA	
	B	2000	DRB3/4/5	2000				
	C	2000	DQA1	2000				
	Class I		DQB1	2000				
			DPB1	5000				
			Class II					
3753	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	A		DRB1		Immuncor	Single Antigen	None	
	B		DRB3/4/5					
	C		DQA1					
	Class I	750	DQB1					
			DPB1					
			Class II	750				

Table 30. Individual Cutoff values and Pretreatment - Exchange 32, cont.

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment
5130	A	2000	DRB1	2000	One Lambda	Labscreen Single Antigen	None
	B	2000	DRB3/4/5	2000			
	C	2000	DQA1	2000			
	Class I	2000	DQB1	2000			
			DPB1	2000			
		Class II	2000				
5214	A	2000	DRB1	2000	One Lambda	Single Antigen	FCS + EDTA
	B	2000	DRB3/4/5	2000			
	C	2000	DQA1	2000			
	Class I	2000	DQB1	2000			
			DPB1	2000			
		Class II	2000				
8001	A		DRB1		One Lambda	Single Antigen	EDTA
	B		DRB3/4/5				
	C		DQA1				
	Class I	1000	DQB1				
			DPB1				
		Class II	1000				
8029	A	500	DRB1	500	IMMUCOR	Lifecodes LSA	EDTA
	B	500	DRB3/4/5	500			
	C	500	DQA1	500			
	Class I	39	DQB1	500			
			DPB1	500			
		Class II	24				
8083	A		DRB1		One Lambda	Single Antigen	EDTA
	B		DRB3/4/5				
	C		DQA1				
	Class I	2000	DQB1				
			DPB1				
		Class II	2000				
8103	A	500	DRB1	500	One Lambda	Single Antigen	DTT
	B	500	DRB3/4/5	500			
	C	500	DQA1	500			
	Class I	23	DQB1	500			
			DPB1	500			
		Class II	17				
8111	A	1000	DRB1	1000	One Lambda	Single Antigen	DTT
	B	1000	DRB3/4/5	1000			
	C	1000	DQA1	1000			
	Class I	1000	DQB1	1000			
			DPB1	1000			
		Class II	1000				
14262	A	1000	DRB1	1000	One Lambda	LabScreen Single Antigen	DTBA/Absorb
	B	1000	DRB3/4/5	1000			
	C	1000	DQA1	1000			
	Class I	1000	DQB1	1000			