

Report of the 26th Single Antigen, Flow and Virtual Crossmatch Exchange

September 14, 2022

Cells	151-152
Serum	153-156

In this current study, serum 150 (patient 2) and virtual donor V2 from Exchange 25 (2022) are re-examined as serum 153 and cell 151. A comparison of virtual crossmatch predictions (VXM) (serum 150 vs. V2) against the physical flow crossmatch (FXM) (**serum 153 vs. cell 151**) are summarized in **Part 1** of this report. **Part 2** examines the Luminex single antigen

(SAB) data for the 4 sera tested (**sera 153 - 156**). **Part 3** summarizes the FXM results for 2 cells (**cells 151 - 152**) against the 4 sera. Finally, in **Part 4**, the VXM predictions for 3 potential donors (V1 - V3) against 2 sera (serum 155 and serum 156) 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 VXM predictions for serum 150 vs. donor V2 in Exchange 25. Among them, 14 labs reported back physical T-cell and B-cell FXM results (Table 1a). Physical T-cell FXM were in complete agreement with virtual T-cell predictions, with all 14 labs

reporting the T-cell FXM as positive in the presence of strong > 17000 class I DSA (Table 1b). For virtual B-cell predictions, 11 labs predicting the B-cell FXM to be positive, reported the physical B-cell FXM as positive as well. Among the labs which predicted a negative B-cell FXM, 1 reported the physical B-cell FXM as positive and the other reported it as borderline.

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

Exchange 025					Exchange 026				
Virtual Crossmatch - Serum 150 (Patient 2) vs. Donor V2					Physical Flow Crossmatch - Serum 153 vs. Cell 151				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V2	150	14	POS(14)	POS(11) NEG(2) NT(1)	151	153	14	POS(14)	POS(13) Borderline(1)

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

		T-cell Virtual XM (Exchange 25)					B-cell Virtual XM (Exchange 25)		
		+	-	Ø			+	-	Ø
Physical T-cell FXM (Exchange 26)	+	14			Physical B-cell FXM (Exchange 26)	+	11	1	1
	-					-			
	Ø					Ø		1	

+/- = positive/negative

Ø = uncertain/not typed

n = number of labs

The reporting of DSA and DSA strength was also consistent across the 2 studies (Table 1c). In Exchange 25, anti-A2 (1811), -B38 (10532), -B53 (18214), and -Cw4 (2366) reactivity was reported against the donor. In Ex-

change 26, labs once again reported the presence of multiple DSA (A2, B38, B53, Cw4) against cell 151. Respective MFI values of each were 2047, 10320, 17349, and 3368.

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

Cell #151 HLA genotype: A*02:01-A*02:02-B*38:01-B*53:01-C*04:01-C*12:03-DRB1*04:11-DRB1*08:06-DRB4*01:03-DQA1*01:02-DQA1*03:01-DQB1*03:02-DQB1*06:02-DPA1*01:03-DPA1*02:02-DPB1*03:01-DPB1*05:01

Exchange 025					Exchange 026				
Virtual Crossmatch - Serum 150 (Patient 2) vs. Donor V2					Physical Flow Crossmatch - Serum 153 vs. Cell 151				
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	A2 (2272) B53 (22202) B38 (14323)	Negative	no class II DSA	230	Positive	A2(2519), B38(13423), B53(20378)	Positive	D/T Class I
792	Positive	Cw4 (1918) B53 (13722) B38 (7723)	Positive	no class II DSA	792	Positive	B53(15151), B38(8913), Cw4(2190)	Positive	No Class II DSA
1426	Positive	Cw4 (4048) A2 (1873) B53 (21336) B38 (13077)	Positive	DQ6(1193)	1426	Positive	B*38:01(10587), B*53:01(17074) C*04:01(3227)	Positive	No Class II DSA
2400	Positive	Cw4 (2348) A2 (1836) B53 (18720) B38 (11326)	Positive	no class II DSA	2400	Positive	A*02:01 for 02:02(1654), B*38:01(10251), B*53:01(17440)	Positive	No Class II DSA, Positive due to Class I Reactivity
3224	Positive	Cw4 (1993) A2 (1908) B53 (17442) B38 (9365)	Positive	no class II DSA	3224	Positive	A2(2047), B38(12877), B53(19432), Cw4(2322)	Positive	No Class II DSA
3632	Positive	Cw4 (2128) A2 (1276) B53 (18711) B38 (11431)	Positive	no class II DSA	3632	Positive	A*02:01(1190), B38(10191), B53(17349), Cw4(1799)	Positive	No Class II DSA
3753	Positive	Cw4 (3084) A2 (1338) B53 (16558) B38 (7830)	Positive	no class II DSA	3753	Positive	A2(1531), B38 (8383), B53(16394), Cw4(3508)	Positive	No Class II DSA
3808	Positive	B53 (6793) B38 (2579)	NT	no class II DSA	3808	Positive Strong	B53(8753), B38(3223)	Positive	No Class II DSA
3966	Positive	Cw4 (2588) B53 (13474) B38 (7422)	Positive	no class II DSA	3966	Positive		Positive	
8001	Positive	Cw4 (2288) A2 (1714) B53 (19452) B38 (11334)	Positive	no class II DSA	8001	Positive	A*02:01(3065) B*38:01(13924) B*53:01(22400) C*04:01(3944) C*12:03(778)	Positive	DQB1*06:02(1252)
8050	Positive	Cw4 (3792) A2 (1482) B53 (18214) B38 (10532)	Positive	no class II DSA	8050	Positive	A2(1259) B38(8630) B53(17041) Cw4(3534)	Positive	No Class II DSA
8083	Positive	Cw4 (3997) A2 (3184) B53 (26442) B38 (17885)	Positive	no class II DSA	8083	Positive	A*02:01(3776), B*38:01(16593), B*53:01(25229), C*04:01(4695), Bw4(28612)	Positive	No class II DSA; Due to class I antibodies
8103	Positive	Cw4 (1963) B53 (7104) B38 (2958)	Negative	no class II DSA	8103	Positive	A*02(684), B*38(4009), B*53(7709), C*04(1936),	Borderline	No Class II DSA
8111	Positive	Cw4 (3098) A2 (1500) B53 (17600) B38 (10900)	Positive	no class II DSA	8111	Positive	B53(19,200); B38(11,800); Cw4(3500); A2(2000)	Positive	DQ6(1200)

Part 2

Class I and class II Luminex single antigen results for serum samples 153 - 156 are summarized in Tables 12 - 15. Individual listing of results for

each participating laboratory are listed in Tables 16 – 22. Pretreatment and cutoff values are listed in Table 30.

Antibody Identification

Serum 153: This sample was previously examined as serum 150 in Exchange 25. As shown below, the reporting of antibodies and antibody strength was consistent across the 2 studies.

Exchange 25		Exchange 26		Exchange 25		Exchange 26	
Class I		Class I		Class II		Class II	
*** Serum 150 ***		*** Serum 153 ***		*** Serum 150 ***		*** Serum 153 ***	
Antigen	Median	Antigen	Median	Antigen	Median	Antigen	Median
B49	21539	B49	21934	DR17	3422	DR17	3256
B50	21319	B50	21667	DR18	3171	DR18	2843
B72	20234	B72	19964	DR52	2181	DR52	1814
B62	19885	B62	18723	DR13	1434	DR13	1645
B35	18954	B35	17944	DR14	1106	DR14	1295
B53	18214	B53	17349				
B45	17622	B45	17252				
B56	17202	B56	16943				
B71	17428	B71	16411				
B41	17118	B41	16054				
B51	17409	B51	15976				
B60	16155	B60	15595				
B78	16541	B78	15399				
B13	16325	B13	15314				
B61	15761	B61	14935				
B44	15441	B44	14787				

Strong anti-B44 (14787) and -B45 (17252) reactivity was detected in this sample. In addition, labs reported reactivity to a number of 5C and 7C specificities, including reactivity to B49 (21934), B50 (21667), B72 (19964), B62 (18723), B35 (17944), B13 (15314), B41 (16054), B60 (15595), and B61 (14935). Weak anti-DR17 (3256), -DR18 (2843) and -DR52 (1814) reactivity was also reported by labs.

Multiple class I DSA (B38, B53, Cw4, and A2) were reported against cell 151, with median respective MFI = 10320, 17349, 3368, and 2047. Against cell 152, labs reported anti-B53 (17349), -B65 (1443), -A68 (1277), -DR52 (1814), and -DR13 (1635) reactivity.

Genotypes of cells provided by UCLA

Cell 151 (Hispanic): A*02:01-A*02:02-B*38:01-B*53:01-C*04:01-C*12:03-DRB1*04:11-DRB1*08:06-DRB4*01:03-DQA1*01:02-DQA1*03:01-DQB1*03:02-DQB1*06:02-DPA1*01:03-DPA1*02:02-DPB1*03:01-DPB1*05:01

Serum 154: For this sample, 100% of labs reported anti-Cw7 (17649), -B53 (12019), -B64 (3629) and -B65 (2555) reactivity. Reactivity to a number of 5C specificities, including B51 (17730), B75 (12981), B52 (12574), B53 (12019), and B35 (11467) was also reported in complete consensus. Three labs reported weak anti-DR9 (1495) reactivity, and 1 lab indicated the sample was negative for class II.

Labs reported anti-B53 (12019) reactivity against cells 151 and 152. Additional anti-B65 (2555) reactivity was also reported against cell 152.

Serum 155: Reactivity to a number of 1C and 10C specificities was reported for this sample, including anti-A29 (24359), -A43 (19803), -A74 (15001), -A30 (14975), -A31 (14316), -A33 (14101), and -A26 (13006) reactivity. Strong class II reactivity was reported as well, with 100% of labs reporting reactivity to DQ2 (18472), along with reactivity to a number of DR specificities, including DR7 (25795), DR53 (24580), and DR9 (21509).

Against cell 151, labs reported anti-DR53 (24580) and -DP3 (4258) reactivity. Against cell 152, multiple DSA (A68, A66 (A6601), DP17) were reported, with respective MFI = 11192, 13327, 10830, 3993.

Serum 156: Strong class I and class II reactivity was detected in this sample, including reactivity to B8 (21959), B42 (20507), B41 (18122), Cw12 (18009), Cw15 (17406), DP2 (16575), and DP3 (16375). Each were reported by 100% of labs.

Multiple DSA (Cw12, B38, Cw4, B53, DP3, DQ6) were reported against cell 151, with the strength of the highest DSA (Cw12, DP3) reported with respective MFI of 18009 and 16375. Multiple DSA (Cw8, Cw6, B65, B53, A68, A66, DP17, DQ6) were also reported against cell 152, with the strength of the highest DSA (Cw8, DP17) reported at 15539 and 16422 MFI, respectively.

Conclusion:

For each of the 4 serum samples, strong class I reactivity (MFI > 17000) was reported, resulting in good agreement (> 90%) among labs. Good agreement was achieved in the reporting of class II reactivity for 3 out of the 4 sera.

Cell 152 (Mixed): A*66:01-A*68:02-B*14:02-B*53:01-C*06:02:01G-C*08:02-DRB1*13:02-DRB1*13:03-DRB3*01:01-DRB3*03:01-DQA1*01:02:01G-DQA1*05:01:01G-DQB1*03:01:01G-DQB1*06:04:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*17:01:01G

Part 3

Flow cytometric crossmatch results for cell 151 and cell 152 against serum samples 153 - 156 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 151. For cell 151, all 4 T/B-cell FXM against serum samples 153 - 156 achieved $\geq 80\%$ agreement. In the case of the positive FXM, class I and/or class II DSA of > 12000 MFI were present.

Cell 152. For cell 152, each pair of T/B-cell FXM against the 4 sera achieved $\geq 80\%$ agreement. All were reported as positive in the presence of class I DSA of > 11000 MFI.

Table 2. Summary of Flow crossmatch results for Cell #151- #152 vs. Serum #153 - #156

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
151	153	17	POS(17)	POS(16) Borderline(1)	152	153	16	POS(16)	POS(15) Borderline(1)
151	154	17	POS(16) Borderline(1)	POS(15) Borderline(2)	152	154	16	POS(16)	POS(14) NEG(2)
151	155	17	NEG(14) POS(1) Borderline(2)	POS(17)	152	155	16	POS(16)	POS(14) NEG(1) Borderline(1)
151	156	17	POS(16) NT(1)	POS(16) NT(1)	152	156	16	POS(15) NT(1)	POS(15) NT(1)

Conclusion:

For the T-cell FXM, $> 80\%$ agreement was achieved for all 8 pairs of T/B-cell FXM. Seven were reported as positive in the presence of class I DSA of > 11000 MFI. In the case of cell 151 vs. serum 155, 2 labs reported the T-cell FXM as borderline. Among them, 1 lab reported the presence of weak class I DSA (B38, B53) of < 900 MFI.

All 8 B-cell FXM were reported as positive by $> 80\%$ agreement. In the case of cell 151 and cell 152 against serum samples 153 and 154, the positivity of the B-cell FXM was due to strong (> 12000 MFI) class I DSA, as the reported class II DSA were either weak or absent all together.

Part 4

Virtual crossmatch predictions for donor V1 - V4 against serum samples 155 and 156 are summarized in Table 3 and individual laboratory pre-

dictions are listed in Tables 23 - 28. 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 predictions. Each were reported as positive in the presence of class I DSA of > 10000 MFI.

For virtual **B-cell predictions** of the expected B-cell FXM, $\geq 80\%$ agreement was achieved for predictions. Each were reported as positive in the presence of class II and/or class I DSA of > 10000 MFI.

Table 3. Summary of Virtual Crossmatch Predictions (Serum #155 - #156 vs. Donors V1 - V3)

Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment	Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment
V1	155	17	POS(17)	POS(17)	Unacceptable(17)	V2	155	17	POS(17)	POS(17)	Unacceptable(17)
V1	156	17	POS(17)	POS(17)	Unacceptable(16) Acceptable(1)	V2	156	17	POS(17)	POS(16) Borderline(1)	Unacceptable(17)
Donor no.	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Predicted Risk Assessment						
V3	155	17	POS(16) Borderline(1)	POS(15) NEG(2)	Unacceptable(16) Acceptable(1)						
V3	156	17	POS(17)	POS(16) Borderline(1)	Unacceptable(17)						

DSA Identification

Patient 1 (Serum 155)

Patient's fictional case history: This individual is a 32-year-old male being evaluated for his second transplant. The HLA type of his first transplant was A*02:01-A*24:02-B*51:01-B*46:01-C*01:02-DRB1*11:04-DRB3*02:02-DQA1*05:03-DQA1*05:01-DQB1*03:01-DPA1*01:03-DPA1*02:01-DPB1*01:01. Patient 1's HLA type was A*02:01-A*24:02-B*51:01-B*46:01-C*01:02-DRB1*11:01-DRB3*02:02-DQA1*05:03-DQA1*05:05-DQB1*03:01-DPA1*01:03-DPA1*02:01-DPB1*01:01,

Multiple DSA (A33, B44, DR53, DR7, DQ2) were reported in this patient against donor **V1**. Each were assigned by $\geq 90\%$ of labs, with respective MFI = 14101, 10476, 24580, 25795, and 18472. In the presence of strong DSA, all 17 labs predicted the expected T/B-cell FXM to be positive. Consequently, all 17 labs predicted the expected risk of transplant to be unacceptable.

Against donor **V2**, multiple DSA (A30, A26, DR53, DP17, DR7, DQ2) were also assigned by $\geq 90\%$ of labs. Respective MFI's for each were 14975, 13006, 24580, 3993, 25795, and 18472. As expected, all 17 labs predicted the expected T/B-cell FXM to be positive and all 17 labs assessed the predicted risk as unacceptable.

Anti-A11 (10758) reactivity was reported against donor **V3** by all labs. By contrast, the reporting of class II DSA was mixed. The majority of labs (n = 12) indicated there were no class II DSA present. Of the remaining 5 labs, 4 labs reported weak anti-DR51 (1153) reactivity against the donor and 1 reported anti-DPA1*02 (4140) reactivity. All but 1 lab predicted the expected T-FXM to be positive, while 15 labs predicted the B-cell FXM to be positive due to class I DSA. One lab reporting the strength of the class I DSA as weak, predicted the expected T-cell FXM to be borderline and the B-cell FXM to be negative. Predicted risk of transplant were in line with FXM predictions, with 16 labs predicting the risk as unacceptable.

Virtual Donors – HLA genotype

Donor 1 (V1): A*33:03-B*15:13-B*44:03-C*07:01:01G-C*08:01:01G-DRB1*07:01-DRB1*14:04-DRB3*01:01:02G-DRB4*01:01:01G-DQA1*01:01:01G-DQA1*02:01-DQB1*02:02-DQB1*05:03-DPA1*01:03-DPA1*02:02:02G-DPB1*02:02-DPB1*05:01:01G

Donor 2 (V2): A*26:01-A*30:01-B*13:02-B*38:01-C*06:02-C*12:03-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*02:01-DPB1*11:01-DPB1*17:01

Donor 3 (V3): A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Patient 2 (Serum 156)

Patient's fictional case history: This individual is a 50-year-old male being evaluated for his second transplant. The HLA type of his first transplant was A*02:01-A*11:01-B*15:11-B*58:01-C*03:03-C*03:02-DRB1*09:01-DRB4*01:03-DQA1*03:03-DQB1*03:03-DPA1*02:01-DPB1*01:01. **Patient 2's HLA type is as follows:** A*02:01 A*11:01-B*15:11 B*58:01-C*03:03 C*03:02-DRB1*09:01-DRB1*07:01-DRB4*01:03-DRB4*01:01-DQA1*03:02-DQA1*03:03-DQB1*03:03-DPA1*02:01.

Strong anti-A33 (14314) and –Cw8 (15539) reactivity was reported against **donor V1** by all 17 labs. In addition, 15 labs reported anti-Cw7 (14061) and –DQ5 (7463) reactivity. DQ2 (2430), DP2 (16575), and DQA1*01(3553) were also reported as DSA by some labs. In the presence of multiple class I and class II DSA, labs predicted the expected T/B-cell FXM to be positive. For renal transplant risk, all but 1 lab predicted the risk to be unacceptable.

Against **donor V2**, multiple DSA (Cw6, Cw12, B38, DP17) were reported by ≥ 90% agreement. Respective MFI for each was 14913, 18009, 11719, and 16422. Additional weak anti-A30 (3439), –B13 (1910), and -DQ2 (2430) reactivity was also reported by some labs. All 17 labs predicted the expected T-cell FXM to be positive and 16 labs predicted the expected B-cell FXM to be positive. In line with predictions, all 17 labs predicted the risk of transplant to be unacceptable.

All 17 labs reported Cw8 (15539), Cw7 (14061), and DQ5 (7463) as DSA against donor **V3**. In addition, 15 labs reported anti-B38 (11719) reactivity against the donor. Two labs noted the donor's B*38:02 was not included on the Luminex SAB panel and did not report it as a DSA since it could not be confirmed. Good agreement was also achieved for virtual predictions. All 17 labs predicted the expected T-cell FXM to be positive, while 16 labs predicted the expected B-cell FXM to be positive. Predicted renal transplant risk was assessed as unacceptable in complete consensus.

Conclusion

No discrepancies were observed among T/B-cell virtual predictions for **serum 155** against donors V1 - V2. All 17 labs predicted the expected T/B-cell FXM to be positive. In each case, class I and/or class II DSA of > 18000 MFI were present. For serum 155 vs. donor V3, several discrepancies were observed. One lab predicted the expected T-cell FXM to be borderline and the B-cell FXM to be negative due to “low MFI on HLA I antibodies” and the absence of class II DSA. Another lab reporting anti-A11 (15208) reactivity against donor V3, predicted the B-cell FXM to be negative due to the absence of class II DSA. As noted previously, labs should

consider the role of both class I and class II DSA in predicting the expected physical B-cell FXM as B-cells express both class I and class II antigens.

For **serum 156** against donors V1– V3, all 3 T-cell virtual predictions were reported as positive in the presence of strong (> 15000 MFI) class I DSA. For B-cell predictions, discrepancies were observed across 2 out of 3 predictions. One lab predicted the expected B-cell FXM for serum 156 vs. donors V2 and V3 to be borderline instead of positive. Class I and class II DSA of < 7300 MFI were reported by the lab.

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Arlene Locke, David Gjertson, Qiheng Zhang, and Elaine F. Reed

Flow Cytometric Crossmatch

Cell #151 HLA genotype: A*02:01-A*02:02-B*38:01-B*53:01-C*04:01-C*12:03-DRB1*04:11-DRB1*08:06-DRB4*01:03-DQA1*01:02-DQA1*03:01-DQB1*03:02-DQB1*06:02-DPA1*01:03-DPA1*02:02-DPB1*03:01-DPB1*05:01

Table 4. Individual Flow crossmatch results and DSA reported for Cell #151 vs. Serum #153

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	153	11	19.2			Positive	A2(2519), B38(13423), B53(20378)	12	21.2			Positive	D/T Class I	5.55	4.09	YES
615	153	349	293			Positive		364	307			Positive		286	292	YES
792	153	57	222			Positive	B53(15151), B38(8913), Cw4(2190)	107	191			Positive	No Class II DSA	231	295	YES
1426	153	59	300			Positive	B*38:01(10587), B*53:01(17074) C*04:01(3227)	86	325			Positive	No Class II DSA	272	255	YES
2400	153	18	136			Positive	A*02:01 for 02:02(1654), B*38:01(10251), B*53:01(17440)	18	125			Positive	No Class II DSA, Positive due to Class I Reactivity	122	158	YES
3224	153	70	262			Positive	A2(2047), B38(12877), B53(19432), Cw4(2322)	140	183			Positive	No Class II DSA	210	183	YES
3632	153	70	352			Positive	A*02:01(1190), B38(10191), B53(17349), Cw4(1799)	100	279			Positive	No Class II DSA	54	139	YES
3753	153	50	179			Positive	A2(1531), B38 (8383), B53(16394), Cw4(3508)	100	160			Positive	No Class II DSA	222	223	YES
3808	153	326	289			Positive Strong	B53(8753), B38(3223)	429	252			Positive	No Class II DSA	257	316	YES
3966	153	20	141			Positive		50	155			Positive		163	220	NO
4345	153					Positive						Positive				NO
5214	153	19	94		21269	Positive	A02:01(2916) B38:01(16534) B53:01(21847) C*04:01(3608)	28	84		26184	Positive	No Class II DSA	258	273	YES
8001	153	50	341			Positive	A*02:01(3065) B*38:01(13924) B*53:01(22400) C*04:01(3944) C*12:03(778)	100	310			Positive	DQB1*06:02(1252)	188	312	YES
8050	153	50	320			Positive	A2(1259) B38(8630) B53(17041) Cw4(3534)	120	262			Positive	No Class II DSA	43	101	YES

Table 4. Individual Flow crossmatch results and DSA reported for Cell #151 vs. Serum #153, 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
8083	153	83	215			Positive	A*02:01(3776), B*38:01(16593), B*53:01(25229), C*04:01(4695), Bw4(28612)	123	197			Positive	No class II DSA; Due to class I antibodies	366	357	YES
8103	153	2128	106	1.2		Positive	A*02(684), B*38(4009), B*53(7709), C*04(1936),	657	814	1.7		Borderline	No Class II DSA	71.4	572.9	NO
8111	153	32	149			Positive	B53(19,200); B38(11,800); Cw4(3500); A2(2000)	40	172			Positive	DQ6(1200)	243	212	YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #151 vs. Serum #154

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	154	11	11			Borderline	B53(15094)	12	11.9			Borderline	D/T Class I	5.55	4.09	YES
615	154	349	169			Positive		364	212			Positive		286	292	YES
792	154	57	181			Positive	B53(9587)	107	137			Positive	No Class II DSA	231	295	YES
1426	154	59	185			Positive	B*53:01(10897)	86	187			Positive	No Class II DSA	272	255	YES
2400	154	18	65			Positive	B*53:01(12155)	18	57			Positive	No Class II DSA, Positive due to Class I Reactivity	122	158	YES
3224	154	70	133			Positive	B53(13469)	140	38			Positive	No Class II DSA	210	183	YES
3632	154	70	240			Positive	B53(11354)	100	190			Positive	No Class II DSA	54	139	YES
3753	154	50	105			Positive	B53(12019)	100	101			Positive	No Class II DSA	222	223	YES
3808	154	326	140			Positive Moderate	B53(6503)	429	151			Positive Moderate	No Class II DSA	257	316	YES
3966	154	20	166			Positive		50	253			Positive		163	220	NO
4345	154					Positive						Positive				NO
5214	154	19	70		9143	Positive	B53:01(16159)	28	59		10052	Positive	No Class II DSA	258	273	YES
8001	154	50	289			Positive	B*53:01(15381)	100	260			Positive	No Class II DSA	188	312	YES
8050	154	50	163			Positive	B53(8928)	120	133			Positive	No Class II DSA	43	101	YES
8083	154	83	102			Positive	B*53:01(21956)	123	57			Positive	No classs II DSA; Due to class I antibodies	366	357	YES
8103	154	2128	143	1.2		Positive	B*53 (5024)	657	1245	1.7		Borderline	No Class II DSA	71.4	572.9	NO
8111	154	32	170			Positive	B53(12,000)	40	169			Positive	No Class II DSA	243	212	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #151 vs. Serum #155

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	155	11	5.41			Negative	No Class I DSA	12	33.3			Positive	DR53(27566)	5.55	4.09	YES
615	155	349	7			Negative		364	331			Positive		286	292	YES
792	155	57	23			Negative	No Class I DSA	107	280			Positive	DR53(20826), DQ8(6907), DQ6(1949)	231	295	YES
1426	155	59	21			Negative	No Class I DSA	86	350			Positive	DRB4*01:03 (26770), DPB1*03:01 (~4337)	272	255	YES
2400	155	18	9			Negative	No Class I DSA	18	125			Positive	DRB4*01:03(25246), DPB1*03:01(4483)	122	158	YES
3224	155	70				Negative	No Class I DSA	140	271			Positive	DR53(24918), DP3(4777)	210	183	YES
3632	155	70	32			Negative	No Class I DSA	100	333			Positive	DRB4*01:03 (24718), DPA1*01:03/ DPB1*03:01(2869)	54	139	YES
3753	155	50	10			Negative	No Class I DSA	100	205			Positive	DP3(3774), DR53(25055)	222	223	YES
3808	155	326	12			Borderline	No Class I DSA	429	220			Positive	DRB4*01(15991), DPB1*03(1309)	257	316	YES
3966	155	20	15			Negative		50	273			Positive		163	220	NO
4345	155					Positive						Positive				NO
5214	155	19	8		296	Negative	B38:01 (1145)	28	99		43749	Positive	DRB4*01:03(23356) DP03:01(6843-7215)	258	273	YES
8001	155	50	49			Negative	B*38:01(519)	100	312			Positive	DRB4*01:03(24243) DPB1*03:01(4579)	188	312	YES
8050	155	50	17			Negative	No Class I DSA	120	298			Positive	DR53(25787) DP3(3269)	43	101	YES
8083	155	83	54			Negative	No Class I DSA	123	189			Positive	DR53*01:03(35684), DPB1*03:01 (7962),	366	357	YES
8103	155	2128	114	1.2		Borderline	B*38 (830), B*53 (534)	657	938	1.7		Positive	DRB4*01(10875), DPB1*03(1229)	71.4	572.9	NO
8111	155	32	18			Negative	No Class I DSA	40	230			Positive	DR53(24,400)	243	212	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #151 vs. Serum #156

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	156	11				NT		12				NT		5.55	4.09	YES
615	156	349	308			Positive		364	366			Positive		286	292	YES
792	156	57	300			Positive	Cw12(14172), B38(8560), Cw4(7371), B53(3485)	107	338			Positive	DP3(13394), DQ6(2011)	231	295	YES
1426	156	59	320			Positive	B*38:01 (13569), B*53:01 (5847), C*04:01 (11694), C*12:03 (19974)	86	381			Positive	DQA1*01:02/ DQB1*06:02 (3,223), DPB1*03:01 (17,490)	272	255	YES
2400	156	18	157			Positive	B*38:01(10089), B*53:01(4062), C*04:01(10365), C*12:03(17211)	18	158			Positive	DQB1*06:02(2735), DPB1*03:01(16170)	122	158	YES
3224	156	70	284			Positive	B38(11719), B53(5187), Cw4(10149), Cw12(18009)	140	334			Positive	DQB1*06:02(2486), DP3(17736)	210	183	YES
3632	156	70	398			Positive	B38(11877), B53(3855), Cw4(8986), C*12:03(17165)	100	387			Positive	DQB1*06:02(1799), DPA1*01:03/ DPB1*03:01(15984)	54	139	YES
3753	156	50	208			Positive	B38(9466), B53(4228), Cw12(16780), Cw4(9509)	100	255			Positive	DP3(14181), DQB1*06:02(1913)	222	223	YES
3808	156	326	311			Positive strong	B38(4349), B53(1665), Cw4(3087), Cw12(7861)	429	265			Positive	DQA1*01(1887), DQB1*06 (1511), DPw3 (8415)	257	316	YES
3966	156	20	199			Positive		50	254			Positive		163	220	NO
4345	156					Positive						Positive				NO
5214	156	19	105		31799	Positive	B38:01(15189) B53:01(7094) C*04:01(12898) C*12:03(20686)	28	101		47495	Positive	DQA01:02(3347-3839) DQA03:01(2430) DQB06:02(3482-3943) DP03:01(20533)	258	273	YES
8001	156	50	403			Positive	B*38:01(12170) B*53:01(5324) C*04:01(11806) C*12:03(19350)	100	348			Positive	DQB1*06:02(2526) DPB1*03:01(16929)	188	312	YES
8050	156	50	357			Positive	B38(9524) B53(4450) Cw4(9395) Cw12(18692)	120	293			Positive	DQB1*06:02(1836) DP3(16375)	43	101	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #151 vs. Serum #156, 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
8083	156	83	266			Positive	B*38:01(19034), B*53:01(10040), C*04:01(17941), C*12:03(25037)	123	280			Positive	DQB1*06:02(5052), DPB1*03:01(21276), also class I antibodies	366	357	YES
8103	156	2128	201	1.2		Positive	B*38(4780), B*53(2110), C*04(6448), C*12(7086)	657	1008	1.7		Positive	DQB1*06 (1581), DPA1*01(6422), DPB1*03 (5988)	71.4	572.9	NO
8111	156	32	179			Positive	B38(9900); Cw4(9200); B53(4500)	40	187			Positive	DQ6 (2400); DP3 (15,200)	243	212	YES

Cell #152 HLA genotype: A*66:01-A*68:02-B*14:02-B*53:01-C*06:02:01G-C*08:02-DRB1*13:02-DRB1*13:03-DRB3*01:01-DRB3*03:01-DQA1*01:02:01G-DQA1*05:01:01G-DQB1*03:01:01G-DQB1*06:04:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*17:01:01G

Table 8. Individual Flow crossmatch results and DSA reported for Cell #152 vs. Serum #153

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	153	7	24.7			Positive	B53(20378)	10	76.1			Positive	DR13(2148)	3.71	3.48	YES
615	153	359	286			Positive		369	390			Positive Strong		296	297	YES
792	153	57	229			Positive	B53(15151), B65(1543)	107	270			Positive	No Class II DSA	245	273	YES
1426	153	59	255.5			Positive	B*14:02(1329), B*53:01(17074)	86	366.5			Positive	DRB3*01:01(2106), DRB3*03:01(1050)	302.5	324.5	YES
2400	153	18	130			Positive	B*14:02(1416), B*53:01(17440)	18	143			Positive	DRB1*13:01 for 13:02(1746), DRB1*13:03(959), DRB3*03:01(1225)	125	155	YES
3224	153	70	276			Positive	A68(1277), B53(19432), B65(1884)	140	273			Positive	DR13(1771), DR52(2647)	179	185	YES
3632	153	70	292			Positive	A*66:01(1094), B65(1550), B53(17349)	100	287			Positive	DRB3*01:01(1610)	61	134	YES
3753	153	50	225			Positive	A68(1065), B53(16394), B65(1370)	100	226			Positive	DR13(1328), DR52(1456)	205	216	YES
3966	153	20	198			Positive		50	276			Positive		147	231	NO
4345	153					Positive						Positive				NO
5214	153	19	87		19010	Positive	A66:01(1195) A68:02(1755) B14:02(2526) B53:01(21847)	28	92		39569	Positive	DR13:03(1645) DRB3*01:01(3541) DRB3*03:01(1936) DQA05:01(1323)	261	277	YES
8001	153	50	353			Positive	A*66:01(815) A*68:02(1831) B*14:02(2785) B*53:01(22400)	100	339			Positive	DRB1*13:03(1577) DRB3*01:01(3443) DRB3*03:01(1919)	217	301	YES
8050	153	50	233			Positive	B53(17041) B65(1019)	120	180			Positive	DR13(1478) DR52(1906)	68	222	NO
8083	153	83	223			Positive	A*68:02(2061), B*53:01(25229), B*14:02(2993), Bw4(28612)	123	205			Positive	DRB1*13:03(2100), DR52*01:01(6707), DR52*03:01(3610), also class I antibodies	283	327	YES
8103	153	1225	167	1.2		Positive	A*68(564), B*14(1501), B*53(7709))	3439	2756	1.7		Borderline	DRB1*13(762), DRB3*01(958)	109.56	3179	NO
8111	153	32	173			Positive	B53(19,200); B65(1700); A68(1400)	40	274			Positive	DR52(1800); DR13(1800)	257	258	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #152 vs. Serum #154

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	154	7	17.9			Positive	B65(4578), B53(15094)	10	42.4			Positive	No Class II DSA	3.71	3.48	YES
615	154	359	231			Positive		369	342			Positive		296	297	YES
792	154	57	213			Positive	B53(9587), B65(2393)	107	256			Positive	No Class II DSA	245	273	YES
1426	154	59	222.5			Positive	B*38:01(2058), B*53:01(10897)	86	254.5			Positive	No Class II DSA	302.5	324.5	YES
2400	154	18	102			Positive	B*14:02(2815), B*53:01(12155)	18	101			Positive	No Class II DSA, Positive due to Class I Reactivity	125	155	YES
3224	154	70	213			Positive	B53(13469), B65(3407)	140	183			Positive	No Class II DSA	179	185	YES
3632	154	70	246			Positive	B53(11354), B65(2552)	100	204			Positive	No Class II DSA	61	134	YES
3753	154	50	237			Positive	B53(12019), B65(2555)	100	192			Positive	No Class II DSA	205	216	YES
3966	154	20	237			Positive		50	366			Positive		147	231	NO
4345	154					Positive						Negative				NO
5214	154	19	84		16847	Positive	B14:02(4666) B53:01(16159)	28	75		21477	Positive	No Class II DSA	261	277	YES
8001	154	50	325			Positive	B*14:02(2947) B*53:01(15381)	100	276			Positive	No Class II DSA	217	301	YES
8050	154	50	150			Positive	B53(8928) B65(1966)	120	106			Positive	No Class II DSA	68	222	NO
8083	154	83	220			Positive	B*14:02(8141), B*53:01(21956),	123	200			Positive	Due to class I antibodies	283	327	YES
8103	154	1225	171	1.2		Positive	B*14(1592), B*53(5024)	3439	2707	1.7		Negative	No Class II DSA	109.56	3179	NO
8111	154	32	180			Positive	B53(12,000); B65(3500)	40	276			Positive	No Class II DSA	257	258	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #152 vs. Serum #155

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	155	7	24.7			Positive	A66(17492), A68(14580)	10	46			Positive	DR53(27566)	3.71	3.48	YES
615	155	359	273			Positive		369	361			Positive		296	297	YES
792	155	57	237			Positive	A68(8395), A66(8171)	107	279			Positive	DP17(3016)	245	273	YES
1426	155	59	270.5			Positive	A*66:01(13327), A*68:02(11441)	86	325.5			Positive	DPB1*17:01 (4311)	302.5	324.5	YES
2400	155	18	121			Positive	A*66:01(11394), A68:02(11386)	18	126			Positive	DPB1*17:01(3843)	125	155	YES
3224	155	70	233			Positive	A66(15186), A68(11329)	140	215			Positive	DP17(4174)	179	185	YES
3632	155	70	269			Positive	A*66:01(10783), A*68:02(9774)	100	246			Positive	DPA1*02:01/ DPB1*17:01(2642)	61	134	YES
3753	155	50	291			Positive	A66(11570), A68(10129)	100	282			Positive	DP17(3731)	205	216	YES
3966	155	20	276			Positive		50	370			Positive		147	231	NO
4345	155					Positive						Negative				NO
5214	155	19	89		20358	Positive	A66:01 (16553) A68:02 (14808)	28	87		33080	Positive	DQA05:01(22910) DP17:01(6662)	261	277	YES
8001	155	50	358			Positive	A*66:01(14067) A*68:02(12697)	100	325			Positive	DPB1*17:01(4319)	217	301	YES
8050	155	50	224			Positive	A66(7482) A68(5663)	120	183			Positive	DP17(3321)	68	222	NO
8083	155	83	244			Positive	A*66:01(19038), A*68:02(17920),	123	240			Positive	DPB1*17:01(7100), also class I antibodies	283	327	YES
8103	155	1225	112	1.2		Positive	A*66(7575), A*68 (4858), B*14(507), B*53(534)	3439	3078	1.7		Borderline	DQA1*05(9888). DPB1*03(1229)	109.56	3179	NO
8111	155	32	206			Positive	A66(13,600); A68(10,800)	40	288			Positive		257	258	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #152 vs. Serum #156

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	156	7				NT		10				NT		3.71	3.48	YES
615	156	359	322			Positive Strong		369	421			Positive Strong		296	297	YES
792	156	57	318			Positive	Cw8(11968), Cw6(11475), A66(7493), B65(6148), B53(3485), A68(2080)	107	369			Positive	DP17(13082), DQ6(1661)	245	273	YES
1426	156	59	292.5			Positive	A*68:02(4835), B*14:02(9379), B*53:01(5847), C*06:02(15603), C*08:02(11084)	86	341.5			Positive	DQA1*01:02/ DQB1*06:04(2,857), DPB1*17:01(18,585)	302.5	324.5	YES
2400	156	18	150			Positive	A*68:02(3350), B*53:01(4062), B*14:02(7965), C*06:02(14318), C*08:02(15096)	18	170			Positive	DQA1*05:01(2918), DQB1*06:04(2347), DPB1*17:01(15834)	125	155	YES
3224	156	70	308			Positive	A68(6666), B53(5187), B65(8090), Cw6(14749), Cw8(15539)	140	307			Positive	DQB1*06:04(2195), DP17(17050)	179	185	YES
3632	156	70	336			Positive	A*68:02(4030), B53(3855), B65(8995), Cw6(14304), C*08:02(11673)	100	356			Positive	DQA1*01:02/DQB1*06:04(1750),DPA1*02:01/DP B1*17:01(16073)	61	134	YES
3753	156	50	320			Positive	A68(3446), B53(4228), B65(7005), Cw6(14913), Cw8(16500)	100	334			Positive	DP17(14626), DQB1*06:04(1613)	205	216	YES
3966	156	20	190			Positive		50	235			Positive		147	231	NO
4345	156					Positive						Positive				NO
5214	156	19	101		31388	Positive	A68:02(4543) B14:02(10679) B53:01(7094) C*06:02(18039)	28	100		52679	Positive	DQA01:02 (3347-7632) DQA05:01 (4545) DQB06:04 (3347) DPB17:01 (20341)	261	277	YES
8001	156	50	399			Positive	A*68:02(2280) B*14:02(8087) B*53:01(5324) C*06:02(16030)	100	367			Positive	DQB1*06:04(1813) DPB1*17:01(17158)	217	301	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #152 vs. Serum #156, 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
8050	156	50	313			Positive	B53(4450) B65(6828) Cw6(15161) Cw8(16420)	120	212			Positive	DQB1*06:04(1284) DQA1*05:01(3006) DP17(16771)	68	222	NO
8083	156	83	238			Positive	A*68:02(7336), B*14:02(14056), B*53:01(10040), C*06:02 (22771)	123	228			Positive	DQB1*06:04(4668), DPB1*17:01(20718), also class I antibodies	283	327	YES
8103	156	1225	390	1.2		Positive	A*66(4089), A*68(1733), B*14(5256), B*53(2110), C*06(7159), C*08(7240)	3439	4291	1.7		Positive	DQB1*06(1581), DPA1*01(6422), DPB1*03(5988)	109.56	3179	NO
8111	156	32	253			Positive	Cw8(14,900); Cw6(14,100); B65(7000); A68(3900); B53(4500)	40	357			Positive	DQ6(2200); DP17(15,300)	257	258	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #153

Class I							
*** Serum 153***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B49	13	100%	21934	21026	5203	8667	28612
B50	13	100%	21667	20806	5303	8551	28856
B72	13	100%	19964	19401	5173	7870	26565
B62	13	100%	18723	18292	5094	7593	26296
B35	13	100%	17944	17987	4945	7818	25381
B53	13	100%	17349	17409	4756	7709	25229
B45	13	100%	17252	16798	5126	6158	24094
B56	13	100%	16943	16433	5024	6130	23692
B71	13	100%	16411	16710	4623	6561	23691
B41	13	100%	16054	15740	5001	5725	23252
B51	13	100%	15976	16398	5204	4960	23684
B60	13	100%	15595	15282	4914	5612	22043
B13	13	100%	15314	15695	4869	6392	23067
B61	13	100%	14935	15086	5051	5200	22436
B44	13	100%	14787	14928	4438	5986	21680
B75	13	100%	13673	14188	4353	5903	20816
B63	13	100%	13171	13620	4077	5661	19724
B76	13	100%	12999	12309	4188	3706	18652
B52	13	100%	12096	12512	3850	5527	19157
B77	13	100%	12005	12411	3711	5916	18836
B47	13	100%	11886	12645	4315	4835	19712
B18	13	100%	10612	10735	4049	2890	16709
B38	13	100%	10320	10585	3972	3223	16593
B57	13	100%	9416	10089	3693	3310	16481
B48	13	100%	9340	9849	4519	1292	17514
B58	13	100%	8958	10011	3539	3996	16146
B59	13	100%	8082	7984	3070	2067	13355
B55	13	100%	7047	7049	2798	1483	12057
B37	13	100%	6958	6315	2747	2253	10895
B46	13	100%	6507	6405	2354	1452	10508
B54	13	100%	4302	4489	1973	786	7673
B64	13	100%	3436	3821	1598	1258	6787
A24	13	100%	2968	3303	1818	936	7123
B8	13	100%	2185	2425	1077	809	4521
A23	12	92%	2342	2718	1456	700	5580
B39	12	92%	7320	7682	2971	2923	12420

Class I							
*** Serum 153***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B67	12	92%	3772	4106	1406	1524	7255
B78	12	92%	15399	16092	3936	6350	22178
Cw10	11	84%	2632	2971	1091	1240	5294
Cw9	11	84%	2653	2954	1081	1230	5058
B65	10	76%	1543	1776	716	773	2993
Cw4	10	76%	3368	3163	833	1936	4695
A2	9	69%	2047	2107	907	684	3776
A69	9	69%	2299	2389	1118	757	4478
B42	7	53%	1398	1624	615	704	2751
A68	5	38%	1277	1389	567	564	2097
A25	4	30%	1091	1231	601	546	2197
B3901	3	23%	2923	3963	2278	1842	7124
Cw15	3	23%	1108	946	265	573	1157

Class II							
*** Serum 153 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR17	12	100%	3256	3431	1632	880	7062
DR18	12	100%	2843	3331	1478	1327	6867
DR52	12	100%	1814	2393	1514	929	6707
DR13	9	75%	1645	2006	942	762	3872
DR14	9	75%	1295	1577	613	682	2817
DQ2	3	25%	1769	2111	920	1196	3370
DQ5	2	16%	1690	1689	447	1243	2136
DR11	2	16%	957	957	52	905	1009
DR12	2	16%	899	898	174	725	1072
DQ4	1	8%	2705	2705	-	2705	2705
DQ6	1	8%	1252	1252	-	1252	1252
DQA1*02	1	8%	1396	1396	-	1396	1396

Blue = DSA against cell #151 only
Gold = DSA against cell #152 only
Green = DSA against cell #151 and #152

Table 13. Summary of Single Antigen results for Serum #154

Class I							
*** Serum 154***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B51	13	100%	17730	17622	5382	7875	29498
Cw7	13	100%	17649	17168	5513	5518	29055
B75	13	100%	12981	13103	4357	5581	22611
B52	13	100%	12574	12676	4069	5613	21496
B53	13	100%	12019	12203	4251	5024	21956
B35	13	100%	11467	12238	4355	4976	21159
B71	13	100%	10946	11819	4004	4383	20214
B77	13	100%	10028	11010	3710	4695	19468
B63	13	100%	9798	10027	3847	4182	19078
B49	13	100%	8348	8990	3873	3422	18313
B62	13	100%	7515	8144	3659	2720	17525
B56	13	100%	6713	7593	3586	1514	15984
B72	13	100%	6413	6770	3173	1889	14680
B46	13	100%	6213	6462	3099	1382	14191
B57	13	100%	6137	6411	3233	1624	15168
B50	13	100%	5568	6108	3089	1697	14092
B18	13	100%	4682	5108	2984	999	12959
B64	13	100%	3629	3990	2273	936	10092
B58	13	100%	3358	3562	2052	931	9096
B65	13	100%	2555	3111	1787	978	8141
B73	12	92%	2858	3286	1785	1530	8525
B78	12	92%	16638	16792	4465	6644	26082
B8	11	84%	2293	2858	1731	987	7546
Cw9	10	76%	2938	3120	1566	1083	7223
Cw10	9	69%	2355	2622	1403	959	6234
A33	5	38%	2368	3330	2180	1341	7475
B4005	2	15%	8856	8855	440	8416	9295
B7801	2	15%	11974	11974	3759	8215	15733
B14	1	7%	1592	1592	-	1592	1592
B15	1	7%	5581	5581	-	5581	5581
B37	1	7%	2281	2281	-	2281	2281
B48	1	7%	6203	6203	-	6203	6203
Cw3	1	7%	1083	1083	-	1083	1083

Class II							
*** Serum 154 ***							
6 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR9	3	50%	1495	1561	125	1452	1736
NEG	2	33%	-	-	-	-	-
DPw1	1	17%	612	612	-	612	612

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 14. Summary of Single Antigen results for Serum #155

Class I							
*** Serum 155 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A29	13	100%	24359	22645	4692	12481	28477
A43	13	100%	19803	18403	4813	8949	26374
A74	13	100%	15001	14549	5311	3856	23530
A30	13	100%	14975	14135	5169	3937	22854
A31	13	100%	14316	13650	5124	3131	22479
A33	13	100%	14101	13775	4987	3826	22830
A26	13	100%	13006	12029	5077	2605	20571
A32	13	100%	11991	11823	4385	3502	19495
A3	13	100%	11682	11150	4579	3172	18513
A34	13	100%	11478	11762	4515	4219	21851
B45	13	100%	11268	11175	3998	2744	18948
A68	13	100%	11192	10779	3810	4828	18067
B76	13	100%	10809	11054	4046	3072	19191
B44	13	100%	10476	10449	3731	3718	18528
A69	13	100%	10214	9822	4396	2318	18266
A25	13	100%	8878	9063	3656	2310	15889
A80	13	100%	8562	8778	3488	1631	15522
A36	13	100%	6466	6309	2969	1120	12290
A1	13	100%	6057	6391	3144	852	12939
B82	12	92%	6898	7059	2477	3513	13211
A11	11	84%	10758	10921	3804	4138	18040
A66	11	84%	13327	13716	4254	7482	22888
B54	11	84%	2399	2662	1195	1155	5571
B63	9	69%	1622	1996	784	1098	3376
B8	9	69%	2184	2577	1082	1221	5147
Cw15	6	46%	1642	2141	1028	1396	4367
B59	5	38%	1274	1552	649	1013	2823
A1101	4	30%	7312	8549	5093	3564	16012
A1102	4	30%	7223	8292	5188	2950	15774
A6601	4	30%	8332	9346	4817	4170	16553
A6602	4	30%	10516	11475	5884	4770	20099
B41	3	23%	1069	1476	710	885	2474
B42	3	23%	1083	1445	898	573	2680
B8201	3	23%	5379	6911	2953	4313	11042
B55	2	15%	852	851	185	667	1036
B13	1	7%	643	643	-	643	643

Class II							
*** Serum 155 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR7	13	100%	25795	25153	4494	14910	34765
DR53	13	100%	24580	23651	5572	10875	35684
DR9	13	100%	21509	20839	4468	9915	30413
DQ2	13	100%	18472	18823	6112	7871	33523
DR10	13	100%	9955	9741	3851	2328	17906
DP9	13	100%	4330	4269	1974	1224	8422
DPw3	13	100%	4258	4155	1874	1229	7962
DPw6	13	100%	4109	3884	1697	1129	7276
DP17	13	100%	3993	3925	1744	1073	7100
DP14	13	100%	3509	3684	1769	988	7520
DP20	12	92%	4009	4084	1578	1270	7306
DQA1*02	10	76%	9385	10147	2303	7121	13958
DQ6	7	53%	2807	3093	1442	1307	6140
DQ9	4	30%	10644.5	11791	3626	8101	17775
DR14	4	30%	1300	1573	560	1157	2535
DQ7	3	23%	11053	12251	4020	8038	17664
DQ8	3	23%	9483	11456	4730	6907	17978
DQ4	2	15%	13112	13112	5116	7996	18228
DQA1*05	1	7%	9888	9888	-	9888	9888
DR1	1	7%	10875	10875	-	10875	10875
DR103	1	7%	1206	1206	-	1206	1206
DR51	1	7%	1153	1153	-	1153	1153

Blue = DSA against cell #151 only
Gold = DSA against cell #152 only
Green = DSA against cell #151 and #152

Table 15. Summary of Single Antigen results for Serum #156

Class I							
*** Serum 156 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B8	13	100%	21959	20092	4701	9228	24354
B42	13	100%	20507	18955	4536	8168	25484
B41	13	100%	18122	16968	4910	6905	25553
Cw12	13	100%	18009	17089	4766	7086	25037
Cw15	13	100%	17406	16218	5072	4981	25060
B54	13	100%	17254	16093	4522	6260	24150
Cw5	13	100%	16701	15721	4794	4712	24183
B59	13	100%	16196	15072	4227	6679	22960
Cw8	13	100%	15539	15095	4080	7240	23043
B18	13	100%	15317	13848	4447	5193	21512
Cw1	13	100%	15172	14772	3926	6760	23105
Cw6	13	100%	14913	14545	3838	7159	22771
Cw16	13	100%	14565	14017	3800	6737	21460
Cw18	13	100%	14399	13902	3901	5899	21477
A33	13	100%	14314	12673	4694	4418	22453
B55	13	100%	14065	13309	4125	5570	20313
Cw7	13	100%	14061	13771	4295	5900	23048
Cw14	13	100%	12714	12736	3375	6686	19769
B64	13	100%	12465	11971	3860	4524	19503
B37	13	100%	12432	12454	3988	5061	20984
B73	13	100%	12141	11750	4320	1985	19821
A32	13	100%	11771	10874	4124	3935	19270
B38	13	100%	11719	11027	3815	4349	19034
B67	13	100%	11576	11061	3921	3184	18339
B61	13	100%	11555	11035	4159	1735	19507
B7	13	100%	11415	11697	4054	3624	19873
Cw4	13	100%	10149	10140	3404	3087	17941
A74	13	100%	9982	9124	3902	2544	17702
Cw2	13	100%	9722	10029	3613	2367	18110
B60	13	100%	9085	8814	3801	1516	16509
B65	13	100%	8090	7933	2648	3497	14056
B51	13	100%	7234	6924	2899	2194	14315
A29	13	100%	6800	6664	3245	1457	14588
B53	13	100%	4450	4879	2074	1665	10040
A1	13	100%	4167	4621	2513	959	11511
B35	13	100%	3950	4120	1706	1528	8146

Class II							
*** Serum 156 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DPw2	13	100%	16575	15987	3991	7734	21109
DPw3	13	100%	16375	15708	4239	5988	21276
DPw6	13	100%	15401	15045	3987	6218	20550
DP18	13	100%	13856	13589	3827	6284	19568
DP28	13	100%	10033	10349	3226	5812	16659
DQ5	13	100%	7463	7783	3251	1887	16649
DP10	12	92%	13996	13993	3263	6070	18733
DP14	12	92%	16156	14933	3900	6955	20645
DP17	12	92%	16422	15447	4114	6926	20718
DP20	12	92%	16193	16003	3379	7470	20681
DP9	12	92%	17135	16053	4186	7395	21845
DQ6	10	76%	2269	2584	1131	1581	5449
DQ2	9	69%	2430	2839	1676	1235	7318
DP402	7	53%	14987	13967	3211	7896	19209
DPw4	6	46%	15817	14614	4416	5071	18379
DQA1*01	2	15%	3553	3552	1666	1887	5218
DP11	1	7%	1069	1069	-	1069	1069
DPA1*01	1	7%	6422	6422	-	6422	6422
DPA1*04	1	7%	5747	5747	-	5747	5747
DPw1	1	7%	1138	1138	-	1138	1138
DQA1*05	1	7%	3006	3006	-	3006	3006

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 15. Summary of Single Antigen results for Serum #156, cont.

Class I							
*** Serum 156 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B49	13	100%	3555	3600	1794	942	8231
B52	13	100%	3447	3969	1682	1319	8155
A36	13	100%	3300	3745	2076	819	9452
A31	12	92%	3752	3970	1958	1234	8555
A34	12	92%	6827	6777	2955	2589	14645
A68	12	92%	4977.5	5190	2766	1591	12918
B39	12	92%	13059.5	13274	3799	5105	21368
B48	12	92%	6351.5	5976	2574	2184	11682
B78	12	92%	3111	3494	1356	1580	6942
B81	12	92%	7033	7055	2641	3944	13386
A30	11	84%	3439	3563	1518	1402	7004
A69	11	84%	4057	4033	2011	1162	8869
A80	10	76%	1649.5	1922	1003	839	4562
B13	10	76%	1910	2042	895	969	4270
B63	10	76%	2116	2485	1060	1041	5127
A66	8	61%	9614.5	9649	4391	4057	18376
Cw17	8	61%	1998.5	2337	986	1199	4647
B27	7	53%	1859	2015	993	1115	4287
B77	6	46%	1181	1434	632	746	2681
A6602	5	38%	8567	7852	3918	3131	13927
B2708	3	23%	2534	2154	744	1115	2814
B3901	3	23%	5327	8088	4063	5105	13832
B7801	3	23%	1580	1772	665	1072	2666
B8101	3	23%	3944	4551	2548	1778	7931
A11	2	15%	1623	1623	445	1178	2068
B58	2	15%	1050	1050	477	573	1527
Cw403	2	15%	8321.5	8321	1788	6534	10109
B14	1	7%	5256	5256	-	5256	5256
B15	1	7%	1041	1041	-	1041	1041
B3902	1	7%	10494	10494	-	10494	10494
B40	1	7%	5495	5495	-	5495	5495
B57	1	7%	500	500	-	500	500
B703	1	7%	3977	3977	-	3977	3977

Table 16a. Individual laboratory results for Serum #153 - class I by One Lambda Single Antigen

	**** Serum 153 ****																											
Ctr	A24	B13	B18	B35	B37	B38	B41	B44	B45	B46	B47	B48	B49	B50	B51	B52	B53	B54	B55	B56	B57	B58	B59	B60	B61	B62	B63	
230	5031	19635	13681	22415	8120	13422	19424	18702	20212	8064	16292	17514	25417	25428	20016	15516	20377	6606	8752	19167	11899	12288	9745	19892	18929	20765	17288	
792	2968	13645	9064	15713	5066	8913	13812	13171	15056	5243	11056	7916	19436	18543	15332	11048	15151	3186	5794	14632	8622	8339	6696	13378	13462	16015	11890	
1426	1527	14207	10272	17944	6788	10587	14697	13270	15846	6508	10611	9922	21580	20432	15596	11460	17074	4181	5863	15856	9373	8958	7786	14354	13564	19326	12681	
2400	3058	15869	10677	17498	7557	10320	16054	14512	17393	5788	11886	9340	21325	21091	15976	12096	17572	4302	7047	15405	9524	9346	8082	15595	14485	18641	12778	
3224	4169	17780	12991	20909	7521	12877	17562	17023	18785	7387	14266	11432	23387	23270	19881	13522	19432	5144	8530	18674	11577	11696	9708	17094	16895	21101	14971	
3632	2423	14719	10612	18310	6958	10191	14967	13842	16188	6507	10876	8882	21934	21667	16961	12522	17349	4433	7278	15923	9416	8793	8997	13383	14056	18723	11982	
3753	2912	15079	8499	17388	2748	8383	15370	14849	17252	5890	11420	6231	21213	21113	15074	10888	16394	3332	5581	16943	8904	8938	5286	14734	14935	17386	13171	
5214	4775	20405	16660	21841	10550	16534	20282	18528	20923	9614	17128	15198	22946	22928	20937	17569	21847	7673	10861	21344	14439	14226	12048	20086	19689	22337	17724	
8001	5418	21423	14159	22640	7349	13924	21328	20544	22704	7829	18423	13375	24284	24328	21828	16028	22400	5706	9320	21772	14843	14516	10194	20890	21449	22751	19039	
8050	1608	15314	9353	17423	3578	8630	16100	14787	17112	5507	12282	8058	23212	23189	15951	11497	17041	3394	5789	17551	8761	8755	5991	15654	15612	18629	13360	
8083	7123	23067	16709	25381	10895	16593	23252	21680	24094	10508	19712	15292	28612	28856	23684	19157	25229	7619	12057	23692	16481	16146	13355	22043	22436	26296	19724	
8103	936	6502	4000	7818	2714	4009	6049	5986	6663	2970	4835	3592	8667	8551	6984	5527	7709	2002	3287	6548	4019	4150	3837	5612	5415	7593	5661	
Avg	3496	16470	11390	18773	6654	11199	16575	15575	17686	6818	13232	10563	21834	21616	17352	13069	18131	4798	7513	17292	10655	10513	8477	16060	15911	19130	14189	
Std																												
Dev.S	1840	4415	3649	4487	2701	3648	4436	4166	4462	2033	4136	4114	4769	4893	4373	3622	4399	1802	2490	4401	3404	3352	2773	4469	4531	4551	3882	
MFI																												
%CV	53%	27%	32%	24%	41%	33%	27%	27%	25%	30%	31%	39%	22%	23%	25%	28%	24%	38%	33%	25%	32%	32%	33%	28%	28%	24%	27%	

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 16b. Individual laboratory results for Serum #147 - class I by Lifecodes-Immucor Single Antigen

	**** Serum 153 ****																										
Ctr	A24	B13	B18	B35	B37	B38	B41	B44	B45	B46	B47	B48	B49	B50	B51	B52	B53	B54	B55	B56	B57	B58	B59	B60	B61	B62	B63
3808	1003	6392	2890	8552	2253	3223	5725	7174	6158	1452	5598	1292	11335	11088	4960	5827	8753	786	1483	6130	3310	3996	2067	5955	5200	8237	6803

Table 16a. Individual laboratory results for Serum #153 - class I by One Lambda Single Antigen, cont.

	**** Serum 153 ****																							
Ctr	B64	B71	B72	B75	B76	B77	B8	A23	B39	B67	B78	Cw10	Cw9	B65	Cw4	A2	A69	B42	A68	A25	B3901	Cw15	Other	
230	4461	21601	23486	17721	16261	14639	2781	3979	12113	4662	18816					2518	2580						B4005	One Lambda
792	3461	14488	17617	12165	10349	10335	2185	2186	5311	3234	13464	2302	2068	1543	2190									One Lambda
1426	3217	16044	19202	13600	12999	12005	2113	1439	6979	3475	14306	3013	3190	1329	3227		1170	1246				1108		One Lambda
2400	3436	16411	18675	14013	12760	11350	2263	2440	6058	3700	15136	2613	2508	1542	2624	1575	1973	1398						One Lambda
3224	4512	18207	22793	15892	13402	13623	2800	3120	7661	4742	17386	3421	3215	1884	2322	2047	2299	1806	1277	1120				One Lambda
3632	3332	15965	19964	13673	13104	12348	2136		12420	3843	15662	2632	2653							2197	7124		A2403,B4005,B3902	One Lambda
3753	3125	15477	19775	13238	10085	10801	1972	2244	4936	3167	14883	2357	2349	1370	3508	1531	1581		1065					One Lambda
5214	5885	21182	22558	19169	18652	17470	3733	4202	10209	5521	20079	3827	4452	2526	3608	2512	3130	2104						One Lambda
8001	5991	21377	23815	19022	14636	16692	3929	4248	8546	5117	19945	4156	3795	2785	3994	3065	3535	1359	1944	1061		1157	Cw1,Cw5,Cw14	One Lambda
8050	2710	16633	20524	12987	10897	10781	1341	1641	4543	3043	14899	1833	1982	1019	3534	1259								One Lambda
8083	6787	23691	26565	20816	17842	18836	4521	5580	10490	7255	22178	5294	5058	2993	4695	3776	4478	2751	2097				Bw4	One Lambda
8103	1501	6561	7870	6246	5324	5916	948	843	2923	1524	6350	1240	1230	773	1936	684	757	704	564	546	2923	573	B40,B15,B14,Cw1 >	One Lambda
Avg	4035	17303	20237	14879	13026	12900	2560	2902	7682	4107	16092	2972	2955	1776	3164	2107	2389	1624	1389	1231	5024	946		
Std																								
Dev.S	1540	4503	4661	3953	3665	3590	1055	1449	3103	1469	4111	1144	1134	755	879	962	1186	664	634	694	2971	324		
MFI																								
%CV	38%	26%	23%	27%	28%	28%	41%	50%	40%	36%	26%	39%	38%	42%	28%	46%	50%	41%	46%	56%	59%	34%		

Blue = DSA against cell #151 only
Gold = DSA against cell #152 only
Green = DSA against cell #151 and #152

Table 16b. Individual laboratory results for Serum #147 - class I by Lifecodes-Immucor Single Antigen, cont.

	**** Serum 153 ****																							
Ctr	B64	B71	B72	B75	B76	B77	B8	A23	B39	B67	B78	Cw10	Cw9	B65	Cw4	A2	A69	B42	A68	A25	B3901	Cw15	Other	
3808	1258	9597	9380	5903	3706	6547	809	700													1842		B82,B703,A2403,B780	Immucor

Table 17a. Individual laboratory results for Serum #154 - class I by One Lambda Single Antigen

**** Serum 154 ****																							
Ctr	B18	B35	B46	B49	B50	B51	B52	B53	B56	B57	B58	B62	B63	B64	B65	B71	B72	B75	B77	Cw7	B73	B78	B8
230	7385	16840	8601	11681	7816	20936	15652	15094	10524	8119	4647	9138	14208	5899	4578	16961	9159	16841	13890	17649	4342	19913	4014
792	3996	10114	5196	7270	5059	16435	10651	9587	6341	5317	2552	7050	8161	3092	2393	9600	5726	11131	9003	14291	2320	14029	1764
1426	3896	10159	5511	8348	5374	14727	11136	10897	6623	5313	2749	7081	8774	2827	2058	9936	5747	10874	9205	16230	3017	13594	1626
2400	4682	11202	5854	7943	5568	17730	12574	12273	6713	6137	3358	7186	9902	3686	2927	11354	6413	13152	10626	20268	2732	16229	2280
3224	6336	13509	7508	10581	7320	20564	13947	13469	9164	7698	4466	9371	10313	4766	3407	12945	7645	14517	11811	20238	3631	17259	2839
3632	4819	11467	6794	9575	6361	17332	12691	11354	7870	6489	4015	8049	9798	3629	2552	10946	6809	12494	10001	17723	2972	15733	
3753	3245	11768	6213	7030	4385	17774	11882	12019	6703	5223	2616	7515	8967	3118	2555	10559	6060	12981	10028	14472	1846	17046	2293
5214	8109	16684	8951	13225	9344	19280	16193	16159	11094	8597	5490	11908	13314	6122	4666	15614	9981	16810	14716	21357	3977	19627	4002
8001	5218	15902	7548	10028	6526	22080	15933	15381	8649	7439	3412	9826	11812	3823	2947	14182	7144	16245	14344	20605	2743	20025	2339
8050	2748	9331	3850	6026	3536	16575	10992	8928	4750	3494	1359	5533	7461	2296	1966	9397	4318	10733	8677	15743	1801	15331	1755
8083	12959	21159	14191	18313	14092	29498	21496	21956	15984	15168	9096	17525	19078	10092	8141	20214	14680	22611	19468	29055	8525	26082	7546
8103	2024	4976	2411	3422	2332	7875	5613	5024	2786	2737	1618	2979	4381	1592	1276	4383	2439	5581	4695	10047	1530	6644	987
Avg	5451	12759	6886	9454	6476	18401	13230	12678	8100	6811	3782	8597	10514	4245	3289	12174	7177	13664	11372	18140	3286	16793	2859
Std																							
Dev.S	2977	4309	2968	3832	3060	5064	3901	4261	3399	3178	2072	3595	3758	2277	1823	4143	3090	4239	3796	4749	1864	4664	1816
MFI																							
%CV	55%	34%	43%	41%	47%	28%	29%	34%	42%	47%	55%	42%	36%	54%	55%	34%	43%	31%	33%	26%	57%	28%	64%

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 17b. Individual laboratory results for Serum #154 - class I by Lifecodes-Immucor Single Antigen

**** Serum 154 ****																							
Ctr	B18	B35	B46	B49	B50	B51	B52	B53	B56	B57	B58	B62	B63	B64	B65	B71	B72	B75	B77	Cw7	B73	B78	B8
3808	999	5987	1382	3434	1697	8281	6033	6503	1514	1624	931	2720	4182	936	978	7566	1889	6372	6668	5518			

Table 17a. Individual laboratory results for Serum #154 - class I by One Lambda Single Antigen, cont.

**** Serum 154 ****					
Ctr	Cw9	Cw10	A33	Other	
230			3440	B48,B4005	One Lambda
792	1916	1623			One Lambda
1426	2804	2149			One Lambda
2400	2607	1958	2030		One Lambda
3224	3187	2644			One Lambda
3632	3072	2654		B7801,B4005	One Lambda
3753	2185		1341	A*33:01	One Lambda
5214	4039	3029			One Lambda
8001	3093	2355	2368	A*33:01	One Lambda
8050					One Lambda
8083	7223	6234	7475	B37	One Lambda
8103	1083	959		B15,B14,Cw3	One Lambda
Avg	3121	2623	3331		
Std					
Dev.S	1651	1488	2437		
MFI					
%CV	53%	57%	73%		

Blue = DSA against cell #151 only
Gold = DSA against cell #152 only
Green = DSA against cell #151 and #152

Table 17b. Individual laboratory results for Serum #154 - class I by Lifecodes-Immucor Single Antigen, cont.

**** Serum 154 ****					
Ctr	Cw9	Cw10	A33	Other	
3808				B7801	Immucor

Table 18a. Individual laboratory results for Serum #155 - class I by One Lambda Single Antigen

	**** Serum 155 ****																									
Ctr	A1	A25	A26	A29	A3	A30	A31	A32	A33	A34	A36	A43	A68	A69	A74	A80	B44	B45	B76	B82	A11	A1101	A1102	A66	A6601	A6602
230	9391	12918	16192	26947	16574	19202	18509	16168	18493	14942	9109	23474	14579	13295	19411	11982	14297	14449	14683	9685	14950			17492		
792	5344	7282	9738	20192	9110	11991	11216	9405	12134	11213	5402	15279	8498	7046	11878	7076	8147	9004	8741	5429	9033			11571		
1426	7076	10053	13006	24952	12413	14975	14316	12455	15029	11842	7048	19803	11906	11808	15973	9080	10476	11268	11098	7432	12524			15114		
2400	6057	8878	13023	24282	11682	15003	14695	11991	14101	11478	6466	20060	11192	10214	15001	8562	9931	11252	10505	6828	10692			13327		
3224	6948	9911	13586	24973	12230	15738	14628	12891	15369	14633	6955	20131	11329	10549	16235	9049	10995	11603	10809	7905	11728			15186		
3632	5673	8872	11683	25320	10147	13366	12952	11448	12351	10606	5881	18646	9912	8748	13789	7757	7812	8578	8557	5379	10470	10485	10454	12120	10783	13457
3753	5927	8680	11585	24989	10723	14481	13406	11569	13023	10373	5626	19104	10129	8940	14363	8488	10527	11540	12095	6967	10758			11570		
5214	9796	13418	17936	22611	16761	19505	19260	17655	18547	12320	9704	21798	15555	15172	20603	13378	14244	15997	15936			16012	15774		16553	20099
8001	7937	10436	15902	24359	13743	17680	17238	13748	17455	16771	7392	21299	12697	12685	18123	10463	12475	13561	13288	8106	12846			16559		
8050	2806	5176	6863	21894	5870	8796	9766	8260	9798	6352	2795	14006	5663	4252	9765	6671	8931	10006	9810	5942	4962			7482		
8083	12939	15889	20571	28477	18513	22854	22479	19495	22830	21851	12290	26374	18067	18266	23530	15522	18528	18948	19191	13211	18040			22888		
8103	2342	4000	2605	12912	4020	6234	5858	5120	6131	6315	2241	10326	4828	4401	6619	4462	5766	6326	5922	4313	4138	4138	3992	7575	5881	7575
Avg	6853	9626	12724	23492	11816	14985	14527	12517	14605	12391	6742	19192	11196	10448	15441	9374	11011	11878	11720	7382	10922	10212	10073	13717	11072	13710
Std																										
Dev.S	2943	3362	4860	3980	4303	4619	4487	3988	4432	4300	2787	4309	3834	4158	4698	3057	3462	3449	3616	2447	3990	5942	5900	4462	5342	6266
MFI																										
%CV	43%	35%	38%	17%	36%	31%	31%	32%	30%	35%	41%	22%	34%	40%	30%	33%	31%	29%	31%	33%	37%	58%	59%	33%	48%	46%

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 18b. Individual laboratory results for Serum #155 - class I by Lifecodes-Immucor Single Antigen

	**** Serum 155 ****																									
Ctr	A1	A25	A26	A29	A3	A30	A31	A32	A33	A34	A36	A43	A68	A69	A74	A80	B44	B45	B76	B82	A11	A1101	A1102	A66	A6601	A6602
3808	852	2310	3696	12481	3172	3937	3131	3502	3826	4219	1120	8949	5783	2318	3856	1631	3718	2744	3072	3513		3564	2950		4170	4770

Table 18a. Individual laboratory results for Serum #155 - class I by One Lambda Single Antigen, cont.

	**** Serum 155 ****									
Ctr	B54	B63	B8	Cw15	B59	B41	B42	B8201	Other	
230	3397	3376	2967						Cw7	One Lambda
792	1721									One Lambda
1426	2399	2036	2184	2235	1427	1069	1083		B55	One Lambda
2400	2271	1622	2078	1650						One Lambda
3224	2626	1436	2085	1396	1274					One Lambda
3632								5379		One Lambda
3753	2170	1098	1849							One Lambda
5214	3970	2665	3395					11042		One Lambda
8001	2505	1381	2273	1568	1223					One Lambda
8050	1155									One Lambda
8083	5571	3037	5147	4367	2823	2474	2680			One Lambda
8103	1497	1317	1221	1634	1013	885	573	4313	B15,B49,B13,B47 >	One Lambda
Avg	2662	1996	2578	2142	1552	1476	1445	6911		
Std										
Dev.S	1254	832	1147	1127	726	869	1099	3617		
MFI										
%CV	47%	42%	45%	53%	47%	59%	76%	52%		

Table 18b. Individual laboratory results for Serum #155 - class I by Lifecodes-Immucor Single Antigen, cont.

	**** Serum 155 ****									
Ctr	B54	B63	B8	Cw15	B59	B41	B42	B8201	Other	
3808										Immucor

Table 19a. Individual laboratory results for Serum #156 - class I by One Lambda Single Antigen

**** Serum 156 ****																											
Ctr	A1	A29	A32	A33	A36	A74	B18	B35	B37	B38	B41	B42	B49	B51	B52	B53	B54	B55	B59	B60	B61	B64	B65	B67	B7	B73	B8
230	6166	8119	12824	14314	5098	10924	15990	5042	14984	12943	19027	19495	4859	8381	4893	5939	17972	17761	16998	11264	11651	13635	8523	12468	14618	13954	16582
792	3363	4586	8515	11741	2757	6512	10913	2707	9874	8560	14154	16244	2561	5368	2893	3485	13211	10696	12148	6657	8950	9667	6148	8751	9350	9564	18516
1426	4952	9228	13526	15027	4082	11819	17667	5183	14383	13569	18492	21832	4060	7772	4914	5847	18928	15776	17758	11840	13629	14194	9379	14030	14160	14810	24288
2400	4123	6800	10759	12790	3300	9158	14148	3480	13252	10171	17798	19131	2851	5610	3447	4207	16032	12906	15437	9085	11555	11559	8104	11257	10688	12141	21959
3224	4835	7668	12655	16277	3941	10032	15703	4315	12432	11719	18997	21432	3694	7922	4079	5187	17492	14557	16256	9895	12882	12465	8090	12314	12799	13227	24354
3632	3171	7882	12081	14324	2805	9982	15874	3265	12070	11877	18122	21301	2631	5340	3409	3855	17254	14073	16196	9157	13043	13519	8995	13325	13056	13008	23978
3753	4167	4940	9842	10645	3147	7464	11312	3636	10016	9466	16957	20803	3018	6159	3294	4228	15975	11924	14044	5592	8753	10929	7005	9503	10516	10630	23514
5214	6535	8475	15187	14482	5375	13231	17829	6106	17267	15189	20707	20507	5237	8642	5937	7094	19695	17536	18457	13249	14429	16071	10679	14867	15533	15768	18731
8001	5216	6652	11771	15616	4073	10036	15317	4423	13468	12170	19834	21580	3971	8213	3885	5324	18525	14065	16588	7159	10920	13306	8087	11576	11415	11020	23896
8050	3515	3314	6762	7147	2653	5271	12597	3950	11136	9524	16855	19710	3555	7234	3438	4450	15483	11960	15248	8465	10912	11006	6828	9669	11139	11489	23644
8083	11511	14588	19270	22453	9452	17702	21512	8146	20984	19034	25553	25484	8231	14315	8155	10040	24150	20313	22960	16509	19507	19503	14056	18339	19873	19821	20130
8103	1572	2925	4236	5519	1185	3937	5971	1786	5061	4780	6905	8168	1191	2862	1938	2110	6260	5570	6679	4200	5495	5256	3742	4515	5300	5333	9228
Avg	4927	7098	11452	13361	3989	9672	14569	4337	12911	11584	17783	19641	3822	7318	4190	5147	16748	13928	15731	9423	11811	12593	8303	11718	12371	12564	20735
Std																											
Dev.S	2478	3126	3919	4396	2062	3706	4000	1666	3981	3579	4367	4202	1763	2781	1629	2017	4252	3832	3868	3440	3453	3485	2520	3472	3606	3558	4501
MFI																											
%CV	50%	44%	34%	33%	52%	38%	27%	38%	31%	31%	25%	21%	46%	38%	39%	39%	25%	28%	25%	37%	29%	28%	30%	30%	29%	28%	22%

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 19b. Individual laboratory results for Serum #155 - class I by Lifecodes-Immucor Single Antigen

**** Serum 156 ****																											
Ctr	A1	A29	A32	A33	A36	A74	B18	B35	B37	B38	B41	B42	B49	B51	B52	B53	B54	B55	B59	B60	B61	B64	B65	B67	B7	B73	B8
3808	959	1457	3935	4418	819	2544	5193	1528	6984	4349	7188	10732	942	2194	1319	1665	8236	5887	7168	1516	1735	4524	3497	3184	3624	1985	12383

Table 19a. Individual laboratory results for Serum #156 - class I by One Lambda Single Antigen, cont.

	**** Serum 156 ****																										
Ctr	Cw1	Cw12	Cw14	Cw15	Cw16	Cw18	Cw2	Cw4	Cw5	Cw6	Cw7	Cw8	A31	A34	A68	B39	B3901	B48	B78	B7801	B81	B8101	A30	A69	A80	B13	B63
230	15927	19986	16605	19035	17703	13786	11950	12020	18069	16260	12061	15454	4355	7583	5525	12558		6914	3734		7712		3508	4057	2130	2431	2762
792	11420	14172	9827	13318	10820	11326	7705	7371	12395	11475	10398	11968	2503	5305	4490	9929		3533	2330		4813		2110	1839			
1426	16304	19974	14209	18758	15167	15741	11757	11694	18036	15603	16815	16676	5561	7904	6069	15466		8310	4193		9194		4847	5443	2329	1876	2705
2400	14969	17363	12615	16470	13435	14399	10398	10519	16071	14467	15311	15184	3482	6002	4824	12267		6382	2882		6928		3032	3698	1560	1792	1917
3224	15358	18009	12714	17671	14034	15027	10596	10149	16522	14749	14748	15539	3946	7767	6666	13561		6321	3557		7138		3439	4270	1739	1944	1961
3632	14668	17165	12320	16458	13061	13723	9615	8986	15969	14304	13235	15249	4325	6852	5354	13835	13832	6440	2666	2666	7931	7931	4266	4206			
3753	15116	16780	12213	16628	14565	13313	9465	9509	16701	14913	12784	16500	2610	5174	3446	11785		2184	2768		4002		2044	2253	1273	1015	1854
5214	17570	20686	15195	19779	17209	17692	13584	12898	19087	18039	17525	18256	6017	7901	4543	17396		8413	5100		9479		4747	5413	2268	2624	3308
8001	17073	19350	13131	18335	15319	16153	9722	11806	18114	16030	16032	17364	3558	6802	5131	14367		4106	3340		5095		2803	3160	1511	1948	2271
8050	15172	18692	13002	17406	15013	14926	9521	9395	16805	15161	14061	16420	1234	2589		11651		3929	2844		5040				1012	1551	1905
8083	23105	25037	19769	25060	21460	21477	18110	17941	24183	22771	23048	23043	8555	14645	12918	21368		11682	6942		13386		7004	8869	4562	4270	5127
8103	6760	7086	6686	6935	7710	7271	5590	6448	7720	7159	7111	7240	1499	2802	1733	5105	5105	3498	1580	1580	3944	3944	1402	1162	839	969	1041
Avg	15287	17858	13191	17154	14625	14570	10668	10728	16639	15078	14427	15741	3970	6777	5518	13274	9469	5976	3495	2123	7055	5938	3564	4034	1922	2042	2485
Std																											
Dev.S	3804	4296	3246	4238	3442	3417	3106	2966	3902	3660	3962	3710	2045	3086	2787	3968	6171	2688	1416	768	2758	2819	1592	2109	1057	943	1118
MFI																											
%CV	25%	24%	25%	25%	24%	23%	29%	28%	23%	24%	27%	24%	52%	46%	51%	30%	65%	45%	41%	36%	39%	47%	45%	52%	55%	46%	45%

Table 19b. Individual laboratory results for Serum #155 - class I by Lifecodes-Immucor Single Antigen, cont.

	**** Serum 156 ****																										
Ctr	Cw1	Cw12	Cw14	Cw15	Cw16	Cw18	Cw2	Cw4	Cw5	Cw6	Cw7	Cw8	A31	A34	A68	B39	B3901	B48	B78	B7801	B81	B8101	A30	A69	A80	B13	B63
3808	8604	7861	7290	4981	6737	5899	2367	3087	4712	8164	5900	7350			1591		5327			1072		1778					

Table 19a. Individual laboratory results for Serum #156 - class I by One Lambda Single Antigen, cont.

	**** Serum 156 ****							
Ctr	A66	A6602	Cw17	B27	B77	B2708	Other	
230	12076			2066				One Lambda
792	7493							One Lambda
1426	11877		2778	1993	1752		A11,B58	One Lambda
2400	10053		1979	1652	1176			One Lambda
3224			1700	1859	1186			One Lambda
3632		9548				2814	Cw403,B3902, DQA1*05:01/DQB1*02:01	One Lambda
3753		8567						One Lambda
5214		13927	2555			2534		One Lambda
8001	9176		1825	1135	1063		A*66:02	One Lambda
8050	4057		1199					One Lambda
8083	18376		4647	4287	2681		A11	One Lambda
8103	4089	4089	2018	1115	746	1115	B40,B15,B14,B57 >	One Lambda
Avg	9650	9033	2338	2015	1434	2154		
Std								
Dev.S	4694	4036	1054	1073	692	911		
MFI								
%CV	49%	45%	45%	53%	48%	42%		

Table 19b. Individual laboratory results for Serum #155 - class I by Lifecodes-Immucor Single Antigen, cont.

	**** Serum 156 ****							
Ctr	A66	A6602	Cw17	B27	B77	B2708	Other	
3808		3131					Cw403,B703	Immucor

Table 20a. Individual laboratory results for Serum #153 - 154 - class II by One Lambda Single Antigen

**** Serum 153 ****								**** Serum 154 ****				
Ctr	DR17	DR18	DR52	DR13	DR14	DQ2	Other	Ctr	DR9	DPw1	Other	
230	5241	4952	3085	3271	2232			230				One Lambda
792	2239	2111	1722					792	NEG			One Lambda
1426	2357	2475	1578					1426	1736			One Lambda
2400	3077	2716	1547	1501	1224			2400				One Lambda
3224	3477	2969	2647	1771	1295	1196		3224				One Lambda
3632		2029						3632				One Lambda
3753	2890	2704	1456	1328	1140			3753	NEG			One Lambda
5214	4600	4430	2739	1645	1630		DR8,DR11,DR12	5214				One Lambda
8001	4411	4316	3443	2434	1912	1769	DR11,DR12,DQ5,DQ6, DQB1*05:02, DQB1*06:02, DQA1*02:02 >	8001				One Lambda
8050	3434	3083	1906	1478	1262			8050	1495			One Lambda
8083	7062	6867	6707	3872	2817	3370	DQ4,DQ5	8083				One Lambda
8103	880		958	762	682		DR1,DR3	8103	1452	612		One Lambda
Avg	3606	3514	2526	2007	1577	2112		Avg	-	1561		
Std								Std				
Dev.S	1672	1477	1587	999	650	1127		Dev.S	-	153		
MFI								MFI				
%CV	46%	42%	63%	50%	41%	53%		%CV	-	10%		

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 20b. Individual laboratory results for Serum #153 - 154 - class II by Lifecodes-Immucor Single Antigen

**** Serum 153 ****								**** Serum 154 ****				
Ctr	DR17	DR18	DR52	DR13	DR14	DQ2	Other	Ctr	DR9	DPw1	Other	
3808	1512	1327	929					3808				Immucor

Table 21a. Individual laboratory results for Serum #155 - class II by One Lambda Single Antigen

	**** Serum 155 ****																		
Ctr	DP14	DP17	DP9	DPw3	DPw6	DQ2	DR10	DR53	DR7	DR9	DP20	DQA1*02	DQ6	DQ9	DR14	DQ7	DQ8	Other	
230	5163	5566	5934	5747	5313	20554	12429	27565	27266	24145	5503	13505	3693		2535				One Lambda
792	2740	3016	3209	3085	2920	18534	7779	20826	21819	17595	2930		1944	8101		8038	6907	DQ4	One Lambda
1426	3767	4311	4625	4337	4109	18384	9955	25590	26490	22300	4226	9812	2807		1363			DR103,DR51	One Lambda
2400	3776	3993	4330	4258	4256	18472	10648	24580	25795	22385	4062	12055	2542						One Lambda
3224	3509	4174	4404	4777	4202	23394	10395	24918	25193	21275	3956			10127					One Lambda
3632	2349	2642	2875	2813	2501	15378	6577	23365	27913	19964	2530	8333							One Lambda
3753	3384	3731	3963	3774	3581	16750	8499	25055	26295	20294	3794	8460			1237				One Lambda
5214	6357	6662	7137	6887	6356	21705	14451	22987	23232	22068	6191	13958						DQB1*06:01	One Lambda
8001	4069	4319	4665	4579	4299	23095	11321	24243	24502	22338	4258	11404	3221	11162	1157	11053	9483		One Lambda
8050	3043	3321	3439	3269	3187	17154	9342	25787	28489	21509	2983	8958	1307						One Lambda
8083	7520	7100	8422	7962	7276	33523	17906	35684	34765	30413	7306		6140	17775		17664	17978	DQ4	One Lambda
8103	988	1119	1275	1229	1129	9888	2328	10875	14910	9915	1270	7121						DR1,DQA1*05	One Lambda
Avg	3889	4163	4523	4393	4094	19736	10136	24290	25556	21183	4084	10401	3093	11791	1573	12252	11456		
Std																			
Dev.S	1763	1671	1921	1831	1668	5687	3914	5560	4645	4681	1648	2431	1558	4187	647	4924	5793		
MFI																			
%CV	45%	40%	42%	42%	41%	29%	39%	23%	18%	22%	40%	23%	50%	36%	41%	40%	51%		

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 21b. Individual laboratory results for Serum #155 - class II by Lifecodes-Immucor Single Antigen

	**** Serum 155 ****																		
Ctr	DP14	DP17	DP9	DPw3	DPw6	DQ2	DR10	DR53	DR7	DR9	DP20	DQA1*02	DQ6	DQ9	DR14	DQ7	DQ8	Other	
3808	1235	1073	1224	1309	1369	7871	5012	15991	20323	16706		7871							Immucor

Table 22a. Individual laboratory results for Serum #156 class II by One Lambda Single Antigen

	**** Serum 156 ****																
Ctr	DP18	DP28	DPw2	DPw3	DPw6	DQ5	DP10	DP14	DP17	DP20	DP9	DQ6	DQ2	DP402	DPw4	Other	
230	16584	10594	19467	19377	18586	8782	17042			18554		3347			17443		One Lambda
792	11618	10129	13013	13394	12574	6950	11141	12431	13082	12565	13481	2011	2227	12249			One Lambda
1426	15375	10883	19107	17709	17580	8614	15226	16453	18585	17592	19314	3115	2081		16352	DPw1,DP11,DQA1*01	One Lambda
2400	14468	10033	16772	16285	16457	7459	14416	16148	15990	16653	17707	2711	1689		15162		One Lambda
3224	15749	13320	17729	17736	16034	9938	14337	16189	17050	16066	17013		3162	15025			One Lambda
3632	13856	10022	16575	16014	14731	5758	13654	15270	16073	15693	16528		2512	14987			One Lambda
3753	11169	5812	14662	14181	13458	5738	11999	14262	14626	14290	15210	1747	1235	13057		DQB1*06:02,DQB1*06:04,DQB1*06:09	One Lambda
5214	19283	15833	20251	20533	20097	7632	18315	20155	20341	20232	20789		2430	19209		DQA1*01:01,DQA1*01:02,DQB1*06	One Lambda
8001	12835	9224	16560	16929	15401	9123	13478	16201	17158	15924	17257	2526	2904		15281	DRB1*14:01,DRB1*14:54,DQA1*02:01,DQB1*06:01>	One Lambda
8050	12600	9492	16459	16375	15341	7463	13516	16163	16771	16320	17410	1589		15347		DQA1*05	One Lambda
8083	19568	16659	21109	21276	20550	16649	18733	20645	20718	20681	21845	5449	7318		18379		One Lambda
8103	6284	5986	7734	5988	6218	5194	6070	6955	6926	7470	7395	1581			5071	DPA1*01,DPA1*04	One Lambda
Avg	14116	10666	16620	16316	15586	8275	13994	15534	16120	16003	16723	2675	2840	14979	14615		
Std																	
Dev.S	3658	3299	3627	3999	3827	3011	3408	3673	3787	3529	3888	1227	1778	2416	4838		
MFI																	
%CV	26%	31%	22%	25%	25%	36%	24%	24%	23%	22%	23%	46%	63%	16%	33%		

Blue = DSA against cell #151 only

Gold = DSA against cell #152 only

Green = DSA against cell #151 and #152

Table 22b. Individual laboratory results for Serum #156 - class II by Lifecodes-Immucor Single Antigen

	**** Serum 156 ****																
Ctr	DP18	DP28	DPw2	DPw3	DPw6	DQ5	DP10	DP14	DP17	DP20	DP9	DQ6	DQ2	DP402	DPw4	Other	
3808	7275	6558	8399	8415	8558	1887		8328	8051		8693	1766		7896		DQA1*01	Immucor

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Table 23. Individual Virtual crossmatch results for Serum #155 vs Donor# V1

Donor #V1 HLA A*33:03-B*15:13-B*44:03-C*07:01:01G-C*08:01:01G-DRB1*07:01-DRB1*14:04-DRB3*01:01:02G-DRB4*01:01:01G-DQA1*01:01:01G-DQA1*02:01-DQB1*02:02-DQB1*05:03-DPA1*01:03-DPA1*02:02:02G-DPB1*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)	Risk Assessment	Comments
230	155	28%	Positive	B44 (14297) A33 (18494) Cw7 (4741)	Positive	DR7 (27266) DR53 (27566) DQ2 (20554) DQA1*02 (13505)	Unacceptable	
792	155	99	Positive	B44 (8147) A33 (12134)	Positive	DR7 (21819) DR53 (19867) DQ2 (13077)	Unacceptable	
1426	155	100	Positive	B44 (10673) A33 (15918) Cw7 (4580)	Positive	DR53 (24410) DQ2 (17047)	Unacceptable	
1461	155	29	Positive	B44 (1606) A33 (1923)	Positive	DR7 (17857) DR53 (10168) DQ2 (4406) DQA1*02 (4590)	Unacceptable	
2400	155	98%	Positive	B44 (9990) A33 (14775)	Positive	DR7 (25649) DR14 (1078) DR53 (23547) DQ2 (16692) DQA1*02 (11926)	Unacceptable	
3224	155	97	Positive	B44 (10995) A33 (15369)	Positive	DR7 (25193) DR14 (1161) DR53 (24918) DQ2 (23394)	Unacceptable	DQA1*02:01(16171mfi)
3632	155	96	Positive	B44 (7862) A33 (13833) Cw7 (2066)	Positive	DR7 (27913) DR53 (22012) DQ2 (13347)	Unacceptable	
3753	155	96.88%	Positive	B44 (10527) A33 (13023)	Positive	DR7 (26295) DR14 (1237) DR53 (25055) DQ2 (16750) DQA1*02 (8460)	Unacceptable	
3808	155		Positive	B44 (3718) A33 (3386)	Positive	DR7 (20323) DR53 (15991) DQ2 (7871) DQA1*02 (7871)	Unacceptable	
3966	155	98%	Positive	B44 (11179) A33 (13611)	Positive	DR7 (22164) DR53 (21484) DQ2 (16264) DQA1*02 (10698)	Unacceptable	
8001	155	96	Positive	B44 (12475) A33 (17455)	Positive	DR7 (24502) DR53 (23738) DQ2 (17642) DQA1*02 (18256)	Unacceptable	C*07:01:01G is not included on Luminex Single Antigen Bead panel. DRB1*14:04, DQB1*05:03 and DPB1*02:02 are not included on Luminex Single Antigen Bead panel
8050	155	95.9	Positive	B44 (8931) A33 (9798)	Positive	DR7 (28489) DR53 (25787) DQ2 (17154) DQA1*02 (8958)	Unacceptable	
8080	155	98	Positive	B44 (11228) A33 (31660) Cw7 (3259)	Positive	DR7 (26373) DR53 (25061) DQ2 (18036)	Unacceptable	
8083	155	96.58	Positive	B44 (18528) A33 (22830)	Positive	DR7 (34765) DR53 (33302) DQ2 (25943) DQA1*02 (26177)	Unacceptable	DSA to class I antibodies
8103	155	6	Positive	B15 (5922) B44 (5766) A33 (6131)	Positive	DR7 (14910) DR53 (10875) DQA1*02 (7121)	Unacceptable	DRB4* MFI greater than 10000
8110	155	97	Positive	B44 (17002) A33 (19541)	Positive	DR7 (28406) DR53 (27851) DQ2 (22933) DQA1*02 (16707)	Unacceptable	
8111	155	96	Positive	B44 (11400) A33 (14100)	Positive	DR7 (26300) DR53 (24400) DQ2 (18000)	Unacceptable	

Table 24. Individual Virtual crossmatch results for Serum #155 vs Donor# V2

Donor #V2 HLA A*26:01-A*30:01-B*13:02-B*38:01-C*06:02-C*12:03-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*02:01-DPB1*11:01-DPB1*17:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
230	155	28	Positive	A26 (16193) A30 (19202)	Positive	DR7 (27266) DR53 (27566) DQ2 (20554) DP17 (5566) DQA1*02 (13505)	Unacceptable	
792	155	99	Positive	A26 (9738) A30 (11465)	Positive	DR7 (21819) DR53 (19867) DQ2 (13077)	Unacceptable	
1426	155	100	Positive	A26 (13006) A30 (14396)	Positive	DR7 (26490) DR53 (25589) DQ2 (18560) DP17 (4311)	Unacceptable	
1461	155	29	Positive	A26 (1767) A30 (1853)	Positive	DR7 (17857) DR53 (10168) DQ2 (4406) DP17 (771) DQA1*02 (4590)	Unacceptable	
2400	155	98%	Positive	A26 (12821) A30 (14774)	Positive	DR7 (25649) DR53 (24397) DP17 (3843)	Unacceptable	
3224	155	97	Positive	A26 (13586) A30 (15738)	Positive	DR7 (25193) DR53 (24918) DQ2 (23394) DP17 (4174) DQA1*02 (16171)	Unacceptable	
3632	155	96	Positive	A26 (11683) A30 (13352)	Positive	DR7 (27913) DR53 (23365) DQ2 (13347) DP17 (2642)	Unacceptable	
3753	155	96.88%	Positive	A26 (11585) A30 (14481)	Positive	DR7 (26295) DR53 (25055) DQ2 (16750) DP17 (3731) DQA1*02 (8460)	Unacceptable	
3808	155		Positive	A26 (3696) A30 (3937)	Positive	DR7 (20323) DR53 (15991) DQ2 (7871) DP17 (1073) DQA1*02 (7871)	Unacceptable	
3966	155	98%	Positive	A26 (11292) A30 (14002)	Positive	DR7 (22164) DR53 (21484) DQ2 (16264) DP17 (3974) DPA1*02 (4140) DQA1*02 (10698)	Unacceptable	
8001	155	96	Positive	B13 (521) A26 (15902) A30 (17564) B38 (519)	Positive	DR7 (24502) DR53 (24243) DQ2 (17642) DP17 (4319) DQA1*02 (18256)	Unacceptable	
8050	155	95.9	Positive	A26 (6863) A30 (8796)	Positive	DR7 (28489) DR53 (25787) DQ2 (17154) DP17 (3321) DQA1*02 (8958)	Unacceptable	
8080	155	98	Positive	A26 (13507) A30 (14943)	Positive	DR7 (52746) DR53 (49796) DQ2 (36072) DP17 (3844)	Unacceptable	
8083	155	96.58	Positive	B13 (1192) A26 (20571) A30 (22367) B38 (1640)	Positive	DR103 (1892) DR7 (34765) DR53 (35684) DQ2 (25943) DP17 (7100) DQA1*02 (26177)	Unacceptable	DSA to class I antibodies
8103	155	9	Positive	B13 (643) A26 (6205) A30 (6234) B38 (830)	Positive	DR7 (14910) DR53 (10875) DQ2 (9888) DP17 (1119) DQA1*02 (7121)	Unacceptable	high MFI on both class I and Class II
8110	155	97	Positive	A26 (17309) A30 (20483)	Positive	DR7 (28406) DR53 (27851) DQ2 (22933) DP17 (6860) DQA1*02 (16707)	Unacceptable	
8111	155	96	Positive	A26 (13000) A30 (15300)	Positive	DR7 (26300) DR53 (24400) DQ2 (18000) DP17 (3700)	Unacceptable	

Table 25. Individual Virtual crossmatch results for Serum #155 vs Donor# V3

Donor #V3 HLA A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
230	155	28	Positive	A11 (14950)	Positive	No class II DSA	Unacceptable	Positive due to Class I expression on B cells. No Class II DSA
792	155	99	Positive	A11 (8827)	Positive	No class II DSA	Unacceptable	No Class II DSA, positivity due to Class I DSA reacting on B Cells
1426	155	100	Positive	A11 (12330) B38 (1506)	Positive	DR51 (1056)	Unacceptable	
1461	155	29	Positive	A11 (1711)	Positive	No class II DSA	Unacceptable	
2400	155	98%	Positive	A11 (10312)	Positive	DR51 (1012)	Unacceptable	
3224	155	97	Positive	A11 (11728)	Positive	No class II DSA	Unacceptable	
3632	155	96	Positive	A11 (10485)	Positive	No class II DSA	Unacceptable	
3753	155	96.88%	Positive	A11 (10758)	Positive	No class II DSA	Unacceptable	
3808	155		Positive	A11 (3564)	Positive	No class II DSA	Unacceptable	No CLass II but Class I DSA present
3966	155	98%	Positive	A11 (10275)	Positive	DPA1*02 (4140)	Unacceptable	
8001	155	96	Positive	A11 (12316)	Positive	DR51 (585)	Unacceptable	B*38:02 is not included in Luminex Single Antigen Bead panel. DRB5*01:08N is not included in Luminex Single Antigen Bead panel
8050	155	95.9	Positive	A11 (4962)	Positive	No class II DSA	Unacceptable	
8080	155	98	Positive	A11 (11006) B38 (1648)	Positive	No class II DSA	Unacceptable	Patient has Class I DSA
8083	155	96.58	Positive	A11 (18040)	Positive	No class II DSA	Unacceptable	No B*38:02 bead to confirm.
8103	155	3	Borderline	A11 (4138) B15 (5922) B38 (830)	Negative	No class II DSA	Acceptable	low MFI on HLA I antibodies; DSA to class I antibodies
8110	155	97	Positive	A11 (15208)	Negative	No class II DSA	Unacceptable	
8111	155	96	Positive	A11 (11300)	Positive	DR51 (1000)	Unacceptable	

Table 26. Individual Virtual crossmatch results for Serum #156 vs Donor# V1

Donor #V1 HLA A*33:03-B*15:13-B*44:03-C*07:01:01G-C*08:01:01G-DRB1*07:01-DRB1*14:04-DRB3*01:01:02G-DRB4*01:01:01G-DQA1*01:01:01G-DQA1*02:01-DQB1*02:02-DQB1*05:03-DPA1*01:03-DPA1*02:02:02G-DPB1*02:02-DPB1*05:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
230	156	62	Positive	A33 (14314) Cw7 (12062) Cw8 (15454)	Positive	DQ5 (8783) DQA1*01 (7726)	Unacceptable	
792	156	100	Positive	A33 (11741) Cw7 (10398) Cw8 (11968)	Positive	DQ2 (2227) DQ5 (6950) DPw2 (13013)	Unacceptable	
1426	156	100	Positive	A33 (17376) B77 (1752) Cw7 (11130) Cw8 (16676)	Positive	DQ2 (1416) DQ5 (3833)	Unacceptable	
1461	156	57	Positive	A33 (3044) Cw7 (2255) Cw8 (5284)	Positive	DQ5 (990) DPw2 (6446) DQA1*01 (840)	Unacceptable	
2400	156	100%	Positive	A33 (15026) B77 (1078) Cw7 (15138) Cw8 (15096)	Positive	DQ2 (1159) DQ5 (5162) DPw2 (16637) DQA1*01 (6213)	Unacceptable	
3224	156	100	Positive	A33 (16277) B77 (1186) Cw7 (14748) Cw8 (15539)	Positive	DQ2 (3162) DQ5 (9938) DPw2 (17729)	Acceptable	DQA1*01:01(9938mfi)
3632	156	100	Positive	A33 (17408) Cw7 (8897) Cw8 (15249)	Positive	DQ5 (3631)	Unacceptable	
3753	156	99.93%	Positive	A33 (10645) Cw7 (12784) Cw8 (16500)	Positive	DQ2 (1235) DQ5 (5738) DPw2 (14662)	Unacceptable	
3808	156		Positive	A33 (4418) Cw7 (4457) Cw8 (7350)	Positive	DQ5 (1786) DPw2 (8399) DQA1*01 (1416)	Unacceptable	
3966	156	100%	Positive	A33 (10504) Cw7 (11752) Cw8 (14365)	Positive	DQ5 (7837) DPw2 (16149) DPA1*02 (13722) DQA1*01 (6569)	Unacceptable	C*07:01 not covered in SAB panel. DPB1*02:02 not covered in SAB panel
8001	156	100	Positive	A33 (15616) B77 (1063) Cw8 (17364)	Positive	DQ2 (1168) DQA1*01 (9123)	Unacceptable	C*07:01:01G is not included in Luminex Single Antigen Bead panel. DRB1*14:04, DQB1*05:03 and DPB1*02:02 are not included in Luminex Single Antigen Bead panel
8050	156	99.86	Positive	A33 (7147) Cw7 (14061) Cw8 (16420)	Positive	DQ5 (7463) DPw2 (16459)	Unacceptable	
8080	156	100	Positive	A33 (27254) Cw7 (11998) Cw8 (15405)	Positive	DQ5 (5760)	Unacceptable	
8083	156	99.96	Positive	A33 (22453) B77 (2681) Cw8 (23043)	Positive	DQ2 (2644)	Unacceptable	DSA to class I antibodies. No bead for DQB1*05:03 to confirm.
8103	156	7	Positive	B15 (1041) A33 (5519) Cw7 (7111) Cw8 (7240)	Positive	DQ5 (5194) DPw2 (7734) DPA1*01 (6422)	Unacceptable	high MFI on both class I and Class II
8110	156	100	Positive	A33 (23975) B77 (6044) Cw7 (28405) Cw8 (31151)	Positive	DQ2 (2784) DQ5 (11509) DPw2 (17508)	Unacceptable	
8111	156	91	Positive	A33 (11600) Cw7 (13300) Cw8 (14900)	Positive	DQ2 (1500) DQ5 (6900) DPw2 (15200)	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #156 vs Donor# V2

Donor #V2 HLA A*26:01-A*30:01-B*13:02-B*38:01-C*06:02-C*12:03-DRB1*07:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*02:01-DPB1*11:01-DPB1*17:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
230	156	62	Positive	Cw6 (16260) B13 (2461) A30 (3509) B38 (12943) Cw12 (19986)	Positive	DP17 (18985)	Unacceptable	
792	156	100	Positive	Cw6 (11475) A30 (2110) B38 (8560) Cw12 (14172)	Positive	DQ2 (2227) DP17 (13082)	Unacceptable	
1426	156	100	Positive	Cw6 (15603) B13 (2404) A30 (4678) B38 (13569) Cw12 (19974)	Positive	DQ2 (1416) DP11 (1113) DP17 (18585)	Unacceptable	
1461	156	57	Positive	Cw6 (4816) B38 (2632) Cw12 (5064)	Positive	DP17 (5865)	Unacceptable	
2400	156	100%	Positive	Cw6 (14318) B13 (1708) A30 (2810) B38 (10089) Cw12 (17211)	Positive	DQ2 (1159) DP17 (15834)	Unacceptable	
3224	156	100	Positive	Cw6 (14749) B13 (1944) A30 (3439) B38 (11719) Cw12 (18009)	Positive	DQ2 (3162) DP17 (17050)	Unacceptable	
3632	156	100	Positive	Cw6 (14304) B13 (1843) A30 (4110) B38 (11877) Cw12 (17165)	Positive	DP17 (16073)	Unacceptable	
3753	156	99.93%	Positive	Cw6 (14913) B13 (1015) A30 (2044) B38 (9466) Cw12 (16780)	Positive	DQ2 (1235) DP17 (14626)	Unacceptable	
3808	156		Positive	Cw6 (8164) B38 (4349) Cw12 (7861)	Positive	DP17 (8051)	Unacceptable	
3966	156	100%	Positive	Cw6 (13109) B13 (1950) A30 (2217) B38 (8893) Cw12 (15324)	Positive	DP17 (16134) DPA1*02 (15547)	Unacceptable	
8001	156	100	Positive	Cw6 (16030) B13 (1948) A26 (578) A30 (2803) B38 (12170) Cw12 (19350)	Positive	DQ2 (1168) DP11 (660) DP17 (17158)	Unacceptable	
8050	156	99.86	Positive	Cw6 (15161) B13 (1551) B38 (9524) Cw12 (18692)	Positive	DP17 (16771)	Unacceptable	
8080	156	100	Positive	Cw6 (15050) B13 (1707) A30 (2426) B38 (10038) Cw12 (15941)	Positive	DP17 (16383)	Unacceptable	
8083	156	99.96	Positive	Cw6 (22771) B13 (4270) A26 (1581) A30 (6902) B38 (19034) Cw12 (25037)	Positive	DQ2 (2644) DP17 (20718)	Unacceptable	DSA to class I antibodies
8103	156	6	Positive	Cw6 (7159) B13 (969) A30 (1402) B38 (4780) Cw12 (7086)	Borderline	DP17 (6926)	Unacceptable	high MFI on class I
8110	156	100	Positive	Cw6 (30519) B13 (5992) A26 (3181) A30 (10639) B38 (23583) Cw12 (29665)	Positive	DQ2 (2784) DP17 (19460)	Unacceptable	
8111	156	91	Positive	Cw6 (14100) B13 (1800) A30 (2400) B38 (9900) Cw12 (16800)	Positive	DQ2 (1500) DP17 (15300)	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #156 vs Donor# V3

Donor #V3 HLA A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
230	156	28	Positive	B38 (12943) Cw7 (12062) Cw8 (15454)	Positive	DQ5 (8783) DQA1*01 (6200)	Unacceptable	
792	156	100	Positive	B38 (8560) Cw7 (10398) Cw8 (11968)	Positive	DQ5 (6950)	Unacceptable	
1426	156	100	Positive	B77 (1752) B38 (9246) Cw7 (16815) Cw8 (16676)	Positive	DQ5 (8614)	Unacceptable	
1461	156	57	Positive	B38 (2632) Cw7 (3172) Cw8 (5284)	Positive	DQ5 (1173) DQA1*01 (1268)	Unacceptable	
2400	156	100%	Positive	B77 (1078) B38 (10089) Cw7 (15138) Cw8 (15096)	Positive	DQ5 (7358) DQA1*01 (4676)	Unacceptable	
3224	156	100	Positive	B77 (1186) B38 (11719) Cw7 (14748) Cw8 (15539)	Positive	DQ5 (9938)	Unacceptable	DQA1*01:02(9938mfi)
3632	156	100	Positive	B38 (11877) Cw7 (13235) Cw8 (15249)	Positive	DQ5 (5758)	Unacceptable	DSA to DQB1*05:01 (MFI 7377) and DQB1*05:02 (MFI 4138) were detected.
3753	156	99.93%	Positive	B38 (9466) Cw7 (12784) Cw8 (16500)	Positive	DQ5 (5738)	Unacceptable	
3808	156		Positive	B38 (4349) Cw7 (5900) Cw8 (7350)	Positive	DQ5 (1887) DQA1*01 (1887)	Unacceptable	
3966	156	100%	Positive	B38 (8893) Cw7 (11752) Cw8 (14365)	Positive	DQ5 (7837) DPA1*02 (15547) DQA1*01 (6569)	Unacceptable	
8001	156	100	Positive	B77 (1063) Cw7 (16032) Cw8 (17364)	Positive	DQ5 (9123)	Unacceptable	B*38:02 is not included in Luminex Single Antigen Bead panel. DRB5*01:08N is not included in Luminex Single Antigen Bead panel.
8050	156	99.86	Positive	B38 (9524) Cw7 (14061) Cw8 (16420)	Positive	DQ5 (7463)	Unacceptable	
8080	156	100	Positive	B38 (9538) Cw7 (14560) Cw8 (15405)	Positive	DQ5 (13773)	Unacceptable	
8083	156	99.96	Positive	A11 (2068) B77 (2681) Cw7 (23048) Cw8 (23043)	Positive	DQ5 (16659)	Unacceptable	No B*38:02 bead to confirm. DSA to class I antibodies .
8103	156	5	Positive	B15 (1041) B38 (4780) Cw7 (7111) Cw8 (7240)	Borderline	DQ5 (5194)	Unacceptable	high MFI on class I
8110	156	100	Positive	A11 (2696) B77 (6044) B38 (23582) Cw7 (28404) Cw8 (31151)	Positive	DQ5 (11509)	Unacceptable	
8111	156	91	Positive	B38 (9900) Cw7 (13300) Cw8 (14900)	Positive	DQ5 (6900)	Unacceptable	