

Report of the 22nd Single Antigen, Flow and Virtual Crossmatch Exchange

June 9, 2021

Cells	127-128
Serum	129-132

In this study, Serum 125 (patient 1) and virtual donor V3 from Exchange 21 (March 2021) are re-examined as serum 129 and cell 127. A comparison of virtual crossmatch (VXM) predictions (serum 125 vs. V3) against the physical flow crossmatch (FXM) (**serum 129 vs. cell 127**) are summarized in **Part 1** of this report. **Part 2** examines the Luminex single

antigen data for the 4 sera tested (**serum nos. 129 - 132**) in Exchange 22. **Part 3** summarizes the flow crossmatch results for 2 cells (**cell nos. 127 - 128**) against the 4 sera. Finally, in **Part 4**, the virtual crossmatch predictions for 4 potential donors (V1 - V4) against 2 sera (serum 131 and serum 132) are evaluated.

Part 1

Physical Flow Cytometric Crossmatch vs. Virtual Crossmatch

Direct comparisons of virtual crossmatch predictions with physical FXM outcomes are shown in Tables 1a – 1c. Twenty-one labs submitted VXM predictions for serum 125 vs. donor V3. Of those labs, 13 reported back

physical T/B-cell FXM results (Table 1a). All 13 labs reported the T/B-cell FXM as positive in complete agreement with predictions (Table 1b).

The reporting of DSA and DSA strength was also consistent across

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

Exchange 021					Exchange 022				
Virtual Crossmatch - Serum 125 (Patient 1) vs. Donor V3					Physical Flow Crossmatch - Serum 129 vs. Cell 127				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V3	125	13	POS(13)	POS(13)	127	129	13	POS(13)	POS(13)

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

		T-cell Virtual XM (Exchange 21)					B-cell Virtual XM (Exchange 21)		
		+	-	∅			+	-	∅
Physical T-cell FXM (Exchange 22)	+	13			Physical B-cell FXM (Exchange 22)	+	13		
	-					-			
	∅					∅			

+/- = positive/negative

∅ = uncertain/not typed

n = number of labs

the 2 studies (Table 1c). In Exchange 21, labs reported anti-B44 reactivity against the donor, with a median MFI = 18566. Additional weak anti-B62 (1568) reactivity was reported by 8 out of the 13 labs. In this present study

(Exchange 22), strong anti-B44 (17252) reactivity was reported once again by labs. Interestingly, only 6 labs reported B62 (1619) as a DSA the second time around. This was likely due to the antibody being weak (< 2000 MFI).

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

Cell #127 HLA GeNotype: A*02:01-A*26:02-B*15:01-B*44:03-C*03:03-C*14:03-DRB1*08:03-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQA1*01:03-DQB1*06:01-DQB1*06:04-DPA1*01:03-DPA1*02:02-DPB1*02:01-DPB1*02:02

Exchange 021					Exchange 022				
Virtual Crossmatch - Serum 125 (Patient 1) vs. Donor V3					Physical Flow Crossmatch - Serum 129 vs. Cell 127				
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)
54	Positive	B62(1302) B44(17518)	Positive	No class II DSA	54	Positive	B*15:01(1496); B*44:03(18715)	Positive	No Class II DSA
230	Positive	B44(21678)	Positive	No class II DSA	230	Positive	B44	Positive	No Class II DSA
774	Positive	B44(19022)	Positive	No class II DSA	774	Positive	B*44:03(17913)	Positive	No Class II DSA
792	Positive	B44(16044)	Positive	No class II DSA	792	Positive	B44(13285)	Positive	No Class II DSA
1426	Positive	B62(1086) B44(14825)	Positive	No class II DSA	1426	Positive	B44(15080)	Positive	No Class II DSA
2400	Positive	B44(17056)	Positive	No class II DSA	2400	Positive	B*15:01(1809), B*44:03(19942)	Positive	No Class II DSA
3224	Positive	B62(1591) B44(19703)	Positive	No class II DSA	3224	Positive	B44(18716), B62(1466)	Positive	No Class II DSA
3753	Positive	B44(18109)	Positive	No class II DSA	3753	Positive	B44(16590)	Positive	No Class II DSA
3966	Positive	B62(1643) B44(17955)	Positive	No class II DSA	3966	Positive		Positive	
8001	Positive	B62(1545) B44(21305)	Positive	No class II DSA	8001	Positive	B*15:01(1772) B*44:03(22345)	Positive	No Class II DSA
8050	Positive	B62(1110) B44(19300)	Positive	No class II DSA	8050	Positive	B44(13904)	Positive	No Class II DSA
8083	Positive	B62(1416) B44(20582)	Positive	No class II DSA	8083	Positive	B*44:03(21748)	Positive	No Class II DSA
8111	Positive	B62(1000) B44(15000)	Positive	DR53(2400) DQ7(6000) DQ9(4800)	8111	Positive	B44(15500) B62(1200)	Positive	No Class II DSA

Part 2

Class I and class II Luminex single antigen results for serum samples 129 - 132 are summarized in Tables 12 - 15 and individual results for each

participating laboratory are listed in Tables 16 – 22.

Antibody Identification

Serum 129: This sample was previously examined as serum 125 in Exchange 21. A comparison of results from Exchange 21 and Exchange 22 (below) showed consistency in the reporting of antibodies and antibody strength across the 2 studies.

Exchange 21 Class I		Exchange 22 Class I		Exchange 21 Class II		Exchange 22 Class II	
*** Serum 125 ***		*** Serum 129 ***		*** Serum 125 ***		*** Serum 129 ***	
Antigen	Median	Antigen	Median	Antigen	Median	Antigen	Median
A1	4790	A1	5387	DQ7	6994	DQ7	6580
B13	9409	B13	10100	DQ8	5833	DQ8	5507
B41	8155	B41	7595	DQ9	5440	DQ9	5045
B44	16407	B44	17252	DR4	5861	DR4	5400
B45	18263	B45	19997	DR53	2680	DR53	2700
B47	5968	B47	5647				
B49	9200	B49	8798				
B50	9134	B50	8708				
B60	7704	B60	6998				
B61	7693	B61	7188				
B76	15331	B76	16736				
B82	11021	B82	11456				

Class I DSA (B44, B62) were reported against donor cell 127, with respective median MFI = 17252 and 1619. Against cell 128, anti-B60 (6998) and anti-A24 (3269) reactivity was reported by labs.

Serum 130: Strong reactivity to a number of 5C and 7C specificities was reported in this sample, including anti-B13, -B47, -B48, -B7, -B73, and -B81

Genotypes of cells provided by UCLA

Cell 127 (Korean) - A*02:01-A*26:02-B*15:01-B*44:03-C*03:03-C*14:03-DRB1*08:03-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQA1*01:03-DQB1*06:01-DQB1*06:04- DPA1*01:03-DPA1*02:02-DPB1*02:01-DPB1*02:02

Cell 128 (Filipino) - A*11:01-A*24:02-B*40:10-B*48:01-C*04:03-C*08:01:01G-DRB1*15:02-DRB1*11:01-DRB3*02:02:01G-DRB5*01:01-DQA1*01:02:01G-DQA1*05:01:01G-DQB1*05:02-DQB1*03:01-DPA1*02:02:02G-DPB1*01:01:01G-DPB1*03:01:01G

reactivity. Each were reported by 100% of labs, with respective MFI = 17419, 15920, 16549, 18665, 17246, and 18090. This sample was reported as negative for class II.

Against cell 127, anti-B44 (4247) reactivity was reported. Against cell 128, labs reported strong anti-B48 (16549) and anti-B50 (19765) reactivity.

Serum 131: This sample was strongly positive to a number of 5C, 7C, and 10C specificities, including reactivity to A25 (8156), A32 (9184), A68 (8080), B35 (15946), B56 (10214), B78 (12323), B49 (12809), and B50 (10551). Each were reported by > 90% of labs. Strong class II antibodies were also detected in this sample, with labs reporting anti-DR15 (11126), DR16 (9525), and DR51 (11975) reactivity in complete consensus.

Anti-A26 (5198), -A2 (9740), and -B62 (10750) reactivity was reported against cell 127 in this sample. Against cell 128, anti-A24 (6123), -DR15 (11126), and -DR51 (11975) reactivity was reported.

Serum 132: Strong class I and class II reactivity was reported in this sample, including anti-B49 (9394), -A23 (18353), -A24 (10274), -DP2(15769), -DQ2 (13384), -DR11 (11341), -DR12 (15360), and -DR7 (23638) reactivity. Each were reported by > 90% of labs.

Multiple DSA (B44, B62, A2, DP2, DR52) were reported against cell 127. Respective MFI values for each were 3734, 2203, 1400, 15769, and 18838. Against cell 128, anti-A24 (10274), -DP3 (10530), -DR11 (11341), and -DR52 (18838) reactivity was reported.

Conclusion:

Good agreement (>90%) was achieved in the reporting of class I and class II antibodies for all 4 serum samples. For each serum, peak class I antibodies were reported with median MFI > 16000. Peak class II antibodies were reported with MFI > 6000.

Part 3

Flow cytometric crossmatch results for cell 127 and cell 128 against sera sample nos. 129 - 132 are summarized in Table 2. Individual results

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

Flow Cytometric Crossmatch

Cell 127. For cell 127, all 8 T/B FXM against the 4 sera achieved $\geq 80\%$ agreement among labs. Of the 8 crossmatch pairs, 100% agreement was achieved for 3 of them due to the presence of strong class I and/or class II DSA of > 10000 MFI.

Cell 128. For cell 128, good agreement ($\geq 80\%$) was also achieved for each T/B FXM pair. Among the 8 crossmatches, 3 FXM were reported with no discrepancies. In each case, strong (> 6000 MFI) class I and/or class II DSA were present.

Table 2. Summary of Flow crossmatch results for Cell #127- #128 vs. Serum #129 - #132

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
127	129	18	POS(17) NT(1)	POS(15) NEG(1) NT(2)	128	129	18	POS(16) NEG(1) NT(1)	POS(15) NEG(1) NT(2)
127	130	18	POS(15) NEG(2) NT(1)	POS(13) NEG(3) NT(2)	128	130	18	POS(17) NT(1)	POS(15) NEG(1) NT(2)
127	131	18	POS(17) NT(1)	POS(15) NEG(1) NT(2)	128	131	18	POS(17) NT(1)	POS(16) NT(2)
127	132	18	POS(14) NEG(3) NT(1)	POS(16) NT(2)	128	132	18	POS(16) NEG(1) NT(1)	POS(15) NEG(1) NT(2)

Conclusion:

Good agreement ($\geq 80\%$) was achieved among labs for all 8 T/B FXM pairs with respect to positive FXM outcome. For all but 1 of the FXM, DSA of > 6000 MFI were present. When DSA strength fell below 5000 MFI, discrepancies were observed in the reporting of FXM outcome. This was the

case for cell 127 vs. serum 130. Two out of 17 labs reported the T-cell FXM as negative and 3 out of 17 reported the B-cell FXM as negative. Only a single DSA (B44) of 4247 MFI was detected against the cell. This shows the sensitivity of the FXM can be variable in the presence of weaker DSA.

Part 4

Virtual crossmatch predictions for donor V1 - V4 against sera (patient) samples 131 and 132 are summarized in Table 3 and individual laboratory

predictions are listed in Tables 23 - 30. Fictional donor histories precede each patient-donor summary.

Virtual Crossmatch Paper Challenge

For virtual **T-cell predictions** of the expected T-cell FXM, 7 out of 8 VXM achieved $\geq 80\%$ agreement among labs. The presence of multiple class I DSA were reported in each case. For the remaining VXM, serum 132 vs. donor V3, no agreement was achieved. Seven labs reported the presence of weak (MFI < 2000) DSA (A69, B35) against the donor, while

the remainder noted no class I DSA were present.

For virtual **B-cell predictions** of the expected B-cell FXM, all 8 VXM achieved $\geq 80\%$ agreement among labs. In each case, multiple class I and/or class II DSA were present

Table 3. Summary of Virtual Crossmatch Predictions (Serum #131 - #132 vs. Donors V1 - V4)

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	131	17	POS(17)	POS(17)	Unacceptable(17)	V3	131	17	POS(17)	POS(15) NEG(1) Borderline(1)	Unacceptable(17)
V1	132	17	POS(16) Borderline(1)	POS(17)	Unacceptable(17)	V3	132	17	NEG(12) POS(1) Borderline(4)	POS(17)	Unacceptable(15) Acceptable(1) Other(1)
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
V2	131	17	POS(17)	POS(15) NEG(1) Borderline(1)	Unacceptable(17)	V4	131	17	POS(16) Borderline(1)	POS(15) Borderline(2)	Unacceptable(17)
V2	132	17	POS(15) Borderline(1) NT (1)	POS(17)	Unacceptable(17)	V4	132	17	POS(17)	POS(17)	Unacceptable(17)

indicates consensus < 80%

DSA Identification

Patient 1 (Serum 131)

Patient's fictional case history: This individual is a 56 year old male being evaluated for his second transplant. The HLA type of his first transplant was A*02:01-A*30:01-B*08:01-B*14:01-C*07:02-C*08:01-DRB1*07:01-DRB1*08:01-DRB4*01:03-DQA1*02:01-DQA1*04:01-DQB1*02:01-DQB1*04:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*17:01. The patient's HLA type is A*02:01-A*30:01-B*08:01-B*14:01-C*07:02-C*08:02-DRB1*07:01-DRB1*08:01-DRB4*01:01-DQA1*02:01-DQA1*04:01-DQB1*02:02-DQB1*04:02-DPA1*02:01-DPB1*10:01-DPB1*17:01.

For patient 1, several labs (n = 4), noted the patient's serum as expressing DSA to self. Unfortunately, a different serum from what was originally chosen for the study was sent as serum 131. Due to this mistake, all self DSA were excluded from the analysis for this sample.

Against **donor V1**, anti-A26 (5198), -DR51 (11975), and -DR15 (11126) reactivity was reported by $\geq 90\%$ of labs. Additional reactivity to B51 (16307) and B27 (2263) was also reported against the donor by some labs. The presence of multiple DSA resulted in all 17 labs to predict the expected T/B FXM to be positive. All 17 labs assessed the predicted transplant risk as unacceptable.

No class II DSA were detected against **donor V2**. Class I reactivity was reported, with the majority of labs (n = 14) reporting anti-A24 (6123) reactivity against the donor. The remaining labs that did not report A24 as a DSA noted A*24:07 was not included on the Luminex single antigen panel. Additional anti-B46 (4750), -Cw1 (1234), and -B7 (1430) reactivity was reported by some labs against the donor. All 17 labs predict the expected T-cell FXM to be positive, while 15 predict the expected B-cell FXM to be positive. Renal transplant risk was assessed as unacceptable in complete agreement.

Against **donor V3**, $\geq 90\%$ of labs reported anti-B35 (15946) and -A69 (8347) reactivity. Additional anti-B55 (3023) reactivity was also reported by a number (n = 14) of labs. No class II DSA were reported against the donor. The presence of strong class I DSA resulted in all 17 labs to predict the expected T-cell FXM to be positive and 15 labs to predict the expected B-cell FXM to be positive. As a result, all 17 labs assessed the predicted renal transplant risk as unacceptable for this donor-patient pair.

Multiple DSA were reported against **donor V4**, with $\geq 90\%$ of labs reporting anti-A25, -A23, -B58, and -DR1 activity. Respective median MFI values for each were 8156, 7313, 9381, and 2307. For predictions, 16 labs predict the expected T-cell FXM to be positive, while 15 labs predict the expected B-cell FXM to be positive. One lab predicting borderline results, reported DSA strengths of < 4000 MFI. Predicted renal transplant risk was assessed as unacceptable by all 17 labs for this donor-patient pair.

Virtual Donors – HLA genotype

Donor 1 (V1): A*02:01-A*26:01-B*27:05-B*51:08-C*02:02-C*16:02-DRB1*13:01-DRB1*15:01-DRB3*01:01-DRB5*01:01-DQA1*01:02:01G-DQA1*01:03-DQB1*06:02-DQB1*06:03-DPA1*01:03-DPB1*04:01

Donor 2 (V2): A*02:03-A*24:07-B*07:06-B*46:01-C*01:02-C*07:02-DRB1*12:01-DRB1*14:04-DRB3*01:01-DRB3*03:01-DQA1*01:04-DQA1*05:06-DQB1*03:01-DQB1*05:03-DPA1*02:02-DPB1*05:01

Donor 3 (V3): A*03:01-A*69:01-B*35:01-B*55:01-C*01:02-C*04:01-DRB1*03:02-DRB1*13:02-DRB3*01:01-DRB3*03:01-DQA1*01:02-DQA1*04:01-DQB1*04:02-DQB1*06:04-DPA1*01:03-DPA1*02:02-DPB1*01:01-DPB1*03:01

Donor 4 (V4): A*23:01-A*25:01-B*14:02-B*58:01-C*07:18-C*08:02-DRB1*01:01-DRB1*13:03-DRB3*01:01-DQA1*01:01-DQA1*05:05-DQB1*03:01-DQB1*05:01-DPA1*01:03-DPA1*02:01-DPB1*104:01-DPB1*17:01

Patient 2 (Serum 132)

Patient's fictional case history: Individual is a 35 year-old female being evaluated for her first transplant. The patient's HLA type is A*01:01 A*03:01-B*07:02-B*08:01-C*07:01-C*07:02-DRB1*01:01-DRB1*04:01-DRB4*01:01-DQA1*01:01-DQA1*03:01-DQB1*03:02-DQB1*05:01-DPA1*01:03-DPB1*01:01.

Against **donor V1**, $\geq 90\%$ of labs reported anti-B27 (2748) reactivity. Additional reactivity to B51 (5601) and DR52 (18838) was also reported by a number of labs ($n = 15$) against the donor. Two labs which did not report B51 as a DSA noted B*51:08 was not included on the Luminex single antigen panel. For T-cell predictions, all but 1 lab predict the expected T-cell FXM to be positive. For B-cell predictions, all 17 labs predict the expected B-cell FXM to be positive in the presence of strong class II DSA. As a result, predicted renal transplant risk for this donor-patient pair was assessed as unacceptable in complete agreement.

For sample 132 against **donor V2**, strong anti-DR12 (15360) reactivity was reported by $\geq 90\%$ of labs. In addition, 15 labs reported anti-A24 (10274) and anti-DR52 (18838) reactivity against the donor. Two labs noted A*24:07 was a possible DSA. However, the labs indicated it could not be confirmed, as A*24:07 was not included on the Luminex single antigen panel. Good agreement was achieved for virtual predictions as 15 labs predict the expected T-cell FXM to be positive and all 17 predict the expected B-cell FXM to be positive. Predicted renal transplant risk was assessed as unacceptable by all 17 labs due to the presence of strong DSA.

Anti-DP3 (10530) reactivity was reported against **donor V3** by all 17 labs. Additional anti-DR52 (18838) reactivity was also reported. The reporting of class I DSA against the donor, however, was mixed among labs. Seven labs reported weak anti-A69 (1279) and/or anti-B35 (1143) reactivity and 10 labs indicated no class I DSA were present. The variability in the reporting of class I DSA resulted in 12 labs to predict the expected T-cell FXM to be negative, 4 to predict it to be borderline, and 1 to predict it to be positive. By contrast, all 17 labs predict the expected B-cell FXM to be positive due to the presence of strong class II DSA. Predicted renal transplant risk for this donor-patient pair was assessed as unacceptable in complete agreement.

Against **donor V4**, anti-A23 (18353), -A25 (4854), -B58 (5885), and -DR52 (18838) reactivity was reported by $\geq 90\%$ of labs. Additional anti-DP3 (10530) and -DP17 (10438) reactivity was also reported by labs against the donor. The presence of multiple strong DSA resulted in all 17 labs to predict the expected T- and B-cell FXM to be positive. In turn, all 17 labs assessed the predicted risk of transplant to be unacceptable.

Conclusion

Good agreement ($\geq 80\%$) was achieved for 7 of 8 virtual T-cell predictions and all 8 B-cell predictions. In each case, peak DSA were reported with median MFI > 5600 . For the remaining virtual T-cell prediction, serum 132 against donor V3, labs were split in the reporting of DSA and T-cell predictions. This may be due to the weak (< 1300 MFI) DSA present. As

individual labs have different cut-off values for the reporting of DSA, a number of labs reported A69 (1279) and B35 (1143) as DSA while others did not. The variability in the reporting of DSA, in turn, resulted in variability in the reporting of the expected T-cell FXM, with the majority of labs ($n = 12$) predicting it to be negative.

NEXT MAILING DATE: September 15, 2021

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Flow Cytometric Crossmatch

Cell #127 HLA Genotype: A*02:01-A*26:02-B*15:01-B*44:03-C*03:03-C*14:03-DRB1*08:03-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQA1*01:03-DQB1*06:01-DQB1*06:04- DPA1*01:03-DPA1*02:02-
DPB1*02:01-DPB1*02:02

Table 4. Individual Flow crossmatch results and DSA reported for Cell #127 vs. Serum #129

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	129	60	393			POSITIVE	A*26:02(MFI1271); B*15:01(MFI1496); B*44:03(18715)	90	364			POS due to Class I DSA	No Class II DSA	86	110	YES
230	129		13.3			POSITIVE	B44		10.3			POSITIVE	No Class II DSA			YES
615	129	330	659			POS- Strong	B*44:03(14028)	342	595			POSITIVE	No Class II DSA	267	270	YES
774	129	≥ 50	258			POSITIVE	B*44:03 17913	≥ 120	240			POSITIVE	No Class II DSA	254	290	NO
792	129	52	285			POSITIVE	B44(13285)	106	283			POSITIVE	No Class II DSA	229	258	YES
1426	129	51	347.5			POSITIVE	B44(15080)	93	292			POSITIVE	No Class II DSA	312	289	YES
2400	129	17	184			POSITIVE	B*15:01(1809), B*44:03(19942)	17	126			POSITIVE	No Class II DSA. Positive due to Class I abs.	153	195	YES
3135	129	1,2	5575	1,7		POSITIVE						NT	3293			NO
3224	129	70	302			POSITIVE	B44(18716), B62(1466)	140	269			POSITIVE	No Class II DSA	178	138	YES
3753	129	50	270			POSITIVE	B44(16590)	100	244			POSITIVE	No Class II DSA	215	224	YES
3966	129	20	307			POSITIVE		50	281			POSITIVE		253	349	NO
4345	129					POSITIVE						NEGATIVE				YES
5214	129	19	113		149220	POSITIVE	B44(18305 avg), B62(1451 MFI)	28	103		145044	POSITIVE	No Class II DSA	260	269	YES
8001	129	50	440			POSITIVE	B*15:01(1772) B*44:03(22345)	100	334			POSITIVE	No Class II DSA	216	330	YES
8050	129	50	347		30351	POSITIVE	B44(13904)	120	271		51735	POSITIVE	No Class II DSA	55	183	YES
8083	129	70	239			POSITIVE	B*44:03(21748)	140	342			POS Due to the expression of Class I on B cells	No Class II DSA	448	360	YES
8103	129					NT						NT				YES
8111	129	34	276			POSITIVE	B44(15,500) B62(1200)	35	252			POSITIVE	No Class II DSA	229	209	YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #127 vs. Serum #130

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	130	60	179			POSITIVE	B*44:03(4460)	90	169			POS due to Class I DSA	No Class II DSA	86	110	YES
230	130		10.8			POSITIVE	B44		9.3			POSITIVE	No Class II DSA			YES
615	130	330	449			POS Moderate	B*44:03(3612)	342	405			POS Weak	No Class II DSA	267	270	YES
774	130	≥ 50	85			POSITIVE	B*44:03 4136	≥ 120	111			POSITIVE	No Class II DSA	254	290	NO
792	130	52	113			POSITIVE	B44(2784)	106	102			NEGATIVE	No Class II DSA	229	258	YES
1426	130	51	152.5			POSITIVE	B44(3578)	93	134			POSITIVE	No Class II DSA	312	289	YES
2400	130	17	56			POSITIVE	B*44:03(5576)	17	26			POSITIVE	No Class II DSA. Positive due to Class I abs.	153	195	YES
3135	130	1,2	3709	1,1		NEGATIVE						NT	3293			NO
3224	130	70	90			POSITIVE	B44(5133)	140	51			POSITIVE	No Class II DSA	178	138	YES
3753	130	50	102			POSITIVE	B44(4358)	100	83			NEGATIVE	No Class II DSA	215	224	YES
3966	130	20	90			POSITIVE		50	110			POSITIVE		253	349	NO
4345	130					NEGATIVE						NEGATIVE				YES
5214	130	19	63		21302	POSITIVE	B44(5103 avg)	28	54		21032	POSITIVE	No Class II DSA	260	269	YES
8001	130	50	240			POSITIVE	B*15:01(677) B*44:03(6442)	100	158			POSITIVE	No Class II DSA	216	330	YES
8050	130	50	169		4890	POSITIVE	B44(3068)	120	128		11935	POSITIVE	No Class II DSA	55	183	YES
8083	130	70	102			POSITIVE	B*44:03(5669)	140	190			POS Due to the expression of Class I on B cells	No Class II DSA	448	360	YES
8103	130					NT						NT				YES
8111	130	34	126			POSITIVE	B44(3600)	35	99			POSITIVE	No Class II DSA	229	209	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #127 vs. Serum #131

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	131	60	355			POSITIVE	A*02:01(10659); A*26:01(7117); B*15:01(10564); B*44:03(3333)	90	329			POS due to Class I DSA	No Class II DSA	86	110	YES
230	131		5			POSITIVE	A2,A26,B62		3.6			POSITIVE	No Class II DSA			YES
615	131	330	629			POS Strong	A*02:01(9184); A*26:02(5412); B*15:01(10181); B*44:03(3192)	342	592			POSITIVE	No Class II DSA	267	270	YES
774	131	≥ 50	194			POSITIVE	B*15:01 10915; A*02:01 9228; B*44:03 3412	≥ 120	191			POSITIVE	DQA1*01:03(2932)	254	290	NO
792	131	52	223			POSITIVE	B62(8748), A2(8504), A26(4282), B44(2640)	106	232			POSITIVE	No DSA Detected	229	258	YES
1426	131	51	312.5			POSITIVE	A2(7827), A26(2973), B44(2715), B62(8526)	93	297			POSITIVE	No Class II DSA	312	289	YES
2400	131	17	160			POSITIVE	A*02:01(12452),A*26: 01(7287),B*44:03(395 3),B*15:01(13043)	17	102			POSITIVE	No Class II DSA. Positive due to Class I abs.	153	195	YES
3135	131	1,2	4375	1,3		POSITIVE						NT		3293		NO
3224	131	70	283			POSITIVE	A2(11965), A26(6235), B44(3528), B62(12188)	140	240			POSITIVE	No Class II DSA	178	138	YES
3753	131	50	223			POSITIVE	A2(10115), A26(5198), B62(10585), B44(2367)	100	198			POSITIVE	No Class II DSA	215	224	YES
3966	131	20	241			POSITIVE		50	246			POSITIVE		253	349	NO
4345	131					POSITIVE						NEGATIVE				YES
5214	131	19	103		102717	POSITIVE	A2(13090 avg), A26(8158), B44(3801 avg), B62(14981)	28	92		97224	POSITIVE	No Class II DSA	260	269	YES
8001	131	50	383			POSITIVE	A*02:01(13330) B*15:01(11901) B*44:03(3083)	100	289			POSITIVE	No Class II DSA	216	330	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #127 vs. Serum #131

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8050	131	50	295		17805	POSITIVE	A2(7099) A26(2728) B44(1540) B62(8807)	120	235		35763	POSITIVE	No Class II DSA	55	183	YES
8083	131	70	205			POSITIVE	A*02:01(13181) A26(6397) Bead is for A*26:01, no bead for A*26:02, B*15:01(13350)	140	311			POSITIVE	No Class II DSA	448	360	YES
8103	131					NT						NT				YES
8111	131	34	175			POSITIVE	A2(10100) B62(9900) A26(5600) B44(2300)	35	148			POSITIVE	No Class II DSA	229	209	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #127 vs. Serum #132

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	132	60	191			POSITIVE	B*15:01(1295); B*44:03(3184)	90	317			POSITIVE	DRB3*03:01(19609); DPA1*01:03/ DPB1*02:01(15469)	86	110	YES
230	132		1			POSITIVE	B44,B62,BW4		2			POSITIVE				YES
615	132	330	488			POSITIVE	B*15:01(1288); B*44:03(2745)	342	566			POSITIVE	DRB3*03:01(15407); DPA1*01:03 DPB1*02:02(11749)	267	270	YES
774	132	≥ 50	125			POSITIVE	B*44:03 4862; B*15:01 3135; A*02:01 2005	≥ 120	249			POSITIVE	DRB3*03:01 19137; DPB1*02:01 15615	254	290	NO
792	132	52	148			POSITIVE	B44(2189)	106	279			POSITIVE	DR52(12996). DP2(9766)	229	258	YES
1426	132	51	193.5			POSITIVE	A2(1147), B44(4182), B62(2228)	93	304			POSITIVE	DR52(19397), DP2(15390)	312	289	YES
2400	132	17	77			POSITIVE	A*02:01(1373), B*15:01(2030), B*44:03(3864)	17	102			POSITIVE	DRB3*03:01(20507),D PB1*02:01(16223)	153	195	YES
3135	132	1,2	3663	1,1		NEGATIVE						NT		3293		NO
3224	132	70	127			POSITIVE	A2(1436), B44(4116), B62(2083)	140	249			POSITIVE	DRB3*03:01(18687), DP2(15536)	178	138	YES
3753	132	50	107			POSITIVE	A2(1158), B62(1849), B44(3113), Bw4(4434)	100	236			POSITIVE	DP2(15769),DRB3*03: 01(20895)	215	224	YES
3966	132	20	137			POSITIVE		50	245			POSITIVE		253	349	NO
4345	132					NEGATIVE						POSITIVE				YES
5214	132	19	72		30701	POSITIVE	A2(1423 MFI), B44(4999 avg)	28	89		87531	POSITIVE	DRB3*03(22798), DP2(17820)	260	269	YES
8001	132	50	250			POSITIVE	A*02:01(1696) B*15:01(2316) B*44:03(4400)	100	254			POSITIVE	DRB3*03:01(21379) DPB1*02:01(17235)	216	330	YES
8050	132	50	185		5762	POSITIVE	A2(1067) B44(2918) B62(1840)	120	219		30351	POSITIVE	DP2(16874)	55	183	YES
8083	132	70	-88			NEGATIVE		140	133			POSITIVE	DRB3*03:01(23940), DPB1*02:01(18170)	448	360	YES
8103	132					NT						NT				YES
8111	132	34	80			POSITIVE	B44(2400) B62(1400) A2(900)	35	142			POSITIVE	DR52(10,800) DP2(7900)	229	209	YES

Cell #128 HLA Genotype: A*11:01-A*24:02-B*40:10-B*48:01-C*04:03-C*08:01:01G-DRB1*15:02-DRB1*11:01-DRB3*02:02:01G-DRB5*01:01-DQA1*01:02:01G-DQA1*05:01:01G-DQB1*05:02-DQB1*03:01-DPA1*02:02:02G-DPB1*01:01:01G-DPB1*03:01:01G

Table 8. Individual Flow crossmatch results and DSA reported for Cell #128 vs. Serum #129

Ctr	Serum no	T-Cell		RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell				B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
		Pos cutoff	T Cell MCS					Pos cutoff	B-cell MCS	RATIO	MESF					
54	129	60	191			POSITIVE	A*24:02(3097)	90	253			POSITIVE	DQ7(9026)	91	83	YES
230	129		7			POSITIVE	B60		8.6			POSITIVE	DQ7			YES
615	129	345	450			POS Moderate	A*24:02(1582); B*40:01(5876)	311	477			POS Moderate	DQA1*05:01 DQB1*03:01(6474)	282	239	YES
774	129	≥ 50	109			POSITIVE	B*40:01 7581	≥ 120	148			POSITIVE	DQB1*03:01 8222	280	328	NO
792	129	52	140			POSITIVE	B60(6414)	106	192			POSITIVE	DQ7(6160)	237	238	YES
1426	129	51	140			POSITIVE	B60(6027)	93	191			POSITIVE	DQ7(Avg 5039)	320	277	YES
2400	129	17	62			POSITIVE	A*24:02(3860), B*40:10(10604)	17	51			POSITIVE	DQB1*03:01 (8236)	148	184	YES
3135	129	1,2	1945	1,2		POSITIVE						NT		1586		NO
3224	129	70	106			POSITIVE	A*24:02(3304), B60(8794)	140	156			POSITIVE	DQ7(9912)	186	149	YES
3753	129	50	131			POSITIVE	B60(6054)	100	147			POSITIVE	DQ7(6087)	216	222	YES
3966	129	20	192			POSITIVE		50	236			POSITIVE		195	301	NO
4345	129					NEGATIVE						NEGATIVE				NO
5214	129	19	64		23025	POSITIVE	A*24:02(2847), B60(9539)	28	80		53949	POSITIVE	DQ7(6960 avg) DQA1*05:01 (656) DQB1*03:01 (8926)	260	266	YES
8001	129	50	277			POSITIVE	A*24:02(3233)	100	226			POSITIVE	DQB1*03:01 (8926)	205	331	YES
8050	129	50	182		5531	POSITIVE	B60(5816)	120	171		12308	POSITIVE	DQ7(5862)	54	143	YES
8083	129	70	298			POSITIVE	A*24:02(3277), B*40:02(11970), B*40:01(11042), NoBead forB*40:10	140	259			POSITIVE	DQB1*03:01 (10424)	312	344	YES
8103	129					NT						NT				YES
8111	129	34	148			POSITIVE	B60(8100) A24(2600)	35	192			POSITIVE	DQ7(4200)	232	206	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #128 vs. Serum #130

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	130	60	416			POSITIVE	B*48:01(17112)	90	394			POS due to Class I DSA	No Class II DSA	91	83	YES
230	130		50			POSITIVE	B48, B60		48.7			POSITIVE	No Class II DSA			YES
615	130	345	634			POS Strong	B*40:01(16057); B*48:01(13466)	311	598			POSITIVE	No Class II DSA	282	239	YES
774	130	≥ 50	277			POSITIVE	B*40:01 19480	≥ 120	251			POSITIVE	No Class II DSA	280	328	NO
792	130	52	296			POSITIVE	B60(12673), B48(11041)	106	280			POSITIVE	No DSA Detected	237	238	YES
1426	130	51	336			POSITIVE	B48(14664), B60(18054)	93	296			POSITIVE	No Class II DSA	320	277	YES
2400	130	17	194			POSITIVE	B*40:10(20409), B*48:01(18066)	17	134			POSITIVE	No Class II DSA. Positive due to Class I abs.	148	184	YES
3135	130	1,2	3936	2,5		POSITIVE						NT		1586		NO
3224	130	70	292			POSITIVE	B48(17075), B60(20103)	140	266			POSITIVE	No Class II DSA	186	149	YES
3753	130	50	334			POSITIVE	B60(20461), B48(15555)	100	312			POSITIVE	No Class II DSA	216	222	YES
3966	130	20	354			POSITIVE		50	305			POSITIVE		195	301	NO
4345	130					POSITIVE						NEGATIVE				NO
5214	130	19	112		146872	POSITIVE	B48(20814), B60(22435)	28	107		148755	POSITIVE	No Class II DSA	260	266	YES
8001	130	50	405			POSITIVE	B*48:01(20665)	100	269			POSITIVE	No Class II DSA	205	331	YES
8050	130	50	373		39221	POSITIVE	B48(14480) B60(17760)	120	323		58511	POSITIVE	No Class II DSA	54	143	YES
8083	130	70	445			POSITIVE	B*40:01(23384), B*40:02(23197), NoBead for B*40:10, B*48:01(19433)	140	371			POS Due to the expression of Class I on B cells	No Class II DSA	312	344	YES
8103	130					NT						NT				YES
8111	130	34	284			POSITIVE	B60(14700) B48(13300)	35	261			POSITIVE	No Class II DSA	232	206	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #128 vs. Serum #131

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	131	60	240			POSITIVE	A*11:01(1589); A*24:02(7934); B*40:01(1931); B*48:01(3239)	90	369			POSITIVE	DRB5*01:01 (10497); DRB1*15:02 (9050)	91	83	YES
230	131		4			POSITIVE	A24		7.6			POSITIVE	DR15, DR51			YES
615	131	345	513			POSITIVE	A*11:01(1489); A*24:02(7231); B*40:01(1381); B*48:01(3305)	311	585			POSITIVE	DRB1*15:02(8957); DRB5*01:01(10598)	282	239	YES
774	131	≥ 50	117			POSITIVE	A*24:02 5722; B48 2349	≥ 120	229			POSITIVE	DRB5*01:01 13643; DRB1*15:02 11127	280	328	NO
792	131	52	181			POSITIVE	A24(6524), B48(2725), A11(1955)	106	299			POSITIVE	DR51(8293), DR15(7067)	237	238	YES
1426	131	51	181			POSITIVE	A24(4236), B48(1974)	93	299			POSITIVE	DR15(8037), DR51(9244)	320	277	YES
2400	131	17	83			POSITIVE	A*11:01(2127), A*24:02(10345), B*40:10(2153), B*48:01(4528)	17	94			POSITIVE	DRB1*15:02(12291), DRB5*01:01(13506)	148	184	YES
3135	131	1,2	2161	1,4		POSITIVE						NT	1586			NO
3224	131	70	134			POSITIVE	A11(2867), A24(9263), B48(3566), B60(1578)	140	263			POSITIVE	DR15(11126), DR51(11975)	186	149	YES
3753	131	50	159			POSITIVE	A24(5273), B48(1617)	100	251			POSITIVE	DR15(10463), DR51(11096)	216	222	YES
3966	131	20	222			POSITIVE		50	306			POSITIVE		195	301	NO
4345	131					POSITIVE						POSITIVE				NO
5214	131	19	74		34741	POSITIVE	A11(3192 Avg), A24(9716 Avg), B48(4861), B60(1947)	28	103		127339	POSITIVE	DR15(12090 avg), DR51(12581 avg)	260	266	YES
8001	131	50	287			POSITIVE	A*11:01(1398) A*24:02(9795) B*48:01(3474)	100	271			POSITIVE	DRB1*15:02(12351) DRB5*01:01(14655)	205	331	YES
8050	131	50	201		11456	POSITIVE	A24(3381) B48(1319)	120	252		28248	POSITIVE	DR15(10427) DR51(10844)	54	143	YES
8083	131	70	333			POSITIVE	A*24:02(9962), B40(2417) NoBead for B*40:10, B*48:01(4287)	140	357			POSITIVE	DRB1*15:02 (13543), DRB5*01:01 (15194)	312	344	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #128 vs. Serum #131

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8103	131					NT						NT				YES
8111	131	34	105			POSITIVE	A24(7600) B48(2900) A11(2000) B60(1300)	35	165			POSITIVE	DR51(10400) DR15(9800)	232	206	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #128 vs. Serum #132

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class I DSA(MFI)	B-Cell Pos cutoff	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class II DSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
54	132	60	280			POSITIVE	A*24:02(MFI 9428)	90	425			POSITIVE	DRB1*11:01(12127)	91	83	YES
230	132		1.6			POSITIVE	A24		5.1			POSITIVE	DR11, DP3			YES
615	132	345	548			POSITIVE	A*24:02(8615)	311	643			POS Strong	DRB1*11:01(8449); DPA1*02:01 DPB1*03:01(7885)	282	239	YES
774	132	≥ 50	187			POSITIVE	A*24:02 10885	≥ 120	314			POSITIVE	DRB1*11:01 11102; DP3 10530	280	328	NO
792	132	52	205			POSITIVE	A24(7083)	106	360			POSITIVE	DR11(7067), DP3(6655)	237	238	YES
1426	132	51	231			POSITIVE	A24(9675)	93	368			POSITIVE	DP3(Avg 11309), DR11(12002)	320	277	YES
2400	132	17	109			POSITIVE	A*24:02(11793)	17	144			POSITIVE	DRB1*11:01(12180), DPB1*03:01(10865)	148	184	YES
3135	132	1,2	2627	1,7		POSITIVE						NT		1586		NO
3224	132	70	180			POSITIVE	A24(12435)	140	324			POSITIVE	DR11(10897), DP3(10386)	186	149	YES
3753	132	50	201			POSITIVE	A24(9892)	100	356			POSITIVE	DR11(10953), DP3(10215)	216	222	YES
3966	132	20	273			POSITIVE		50	332			POSITIVE		195	301	NO
4345	132					NEGATIVE						NEGATIVE				NO
5214	132	19	85		52977	POSITIVE	A24(14133 Avg), B60(1106)	28	115		203807	POSITIVE	DR11(13606 avg), DP3(12887 avg)	260	266	YES
8001	132	50	321			POSITIVE	A*24:02(13538)	100	299			POSITIVE	DRB1*11:01(12664) DPB1*03:01(11754)	205	331	YES
8050	132	50	253		11456	POSITIVE	A24(6579)	120	315		53902	POSITIVE	DR11(11341) DP3(10422)	54	143	YES
8083	132	70	255			POSITIVE	A*24:02(12163)	140	375			POSITIVE	DRB1*11:01(13356), DPB1*03:01(12036)	312	344	YES
8103	132					NT						NT				YES
8111	132	34	72			POSITIVE	A24(8000)	35	120			POSITIVE	DR11(4900) DP3(4500)	232	206	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #129

Class I							
*** Serum 129 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B13	13	100%	10100	9471	4357	839	14878
B47	13	100%	5647	5894	2626	743	10008
B76	13	100%	16736	15171	5263	2859	20643
B82	13	100%	11456	10999	3388	3026	14817
A1	12	92%	5387	5158	2600	1086	8351
B41	12	92%	7595	7956	3678	965	13291
B44	12	92%	17252	15453	5170	3509	22345
B45	12	92%	19997	17575	6240	2870	24982
B49	12	92%	8798	8941	4058	1110	15051
B50	12	92%	8708	8802	3894	1030	14154
B60	12	92%	6998	7354	3408	812	12723
B61	12	92%	7188	7811	3247	2261	13478
Cw15	9	69%	3039	2961	777	1510	4100
Cw6	9	69%	3070	2839	1018	562	4058
A23	8	61%	3981	3260	1543	854	4923
Cw18	8	61%	2687	2601	496	1692	3237
Cw2	8	61%	2200	2005	381	1183	2300
Cw5	8	61%	2781	2793	506	1865	3600
A24	4	30%	3269	2825	1181	834	3929
Cw17	4	30%	1955	1881	293	1443	2172
B4005	2	15%	10240	10240	3441	6799	13681
B56	2	15%	1245	1244	76	1169	1320
B62	2	15%	1619	1619	153	1466	1772
B72	2	15%	1370	1370	156	1214	1526
A9	1	7%	4260	4260	-	4260	4260
B12	1	7%	23982	23982	-	23982	23982
B15	1	7%	2859	2859	-	2859	2859
B21	1	7%	12798	12798	-	12798	12798
B40	1	7%	4101	4101	-	4101	4101
B75	1	7%	1001	1001	-	1001	1001
Cw16	1	7%	2563	2563	-	2563	2563

Class II							
*** Serum 129 ***							
12 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR4	13	100%	5400	5306	1937	1332	7833
DQ7	12	92%	6580	6472	2820	865	9912
DQ8	12	92%	5507	5552	2446	958	8475
DQ9	12	92%	5045	5230	2361	698	8219
DR53	11	84%	2700	2748	660	1911	4224
DQA1*03	3	23%	8475	6945	4276	1113	11247
DQ3	2	15%	5691	5691	4733	958	10424
DQA1*05	1	7%	11750	11750	-	11750	11750
DQA1*06	1	7%	13017	13017	-	13017	13017

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 13. Summary of Single Antigen results for Serum #130

Class I							
*** Serum 130 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B13	13	100%	17419	16478	5653	2822	22479
B41	13	100%	7964	7298	3229	875	11000
B47	13	100%	15920	14457	4592	3273	19400
B48	13	100%	16549	14604	6131	944	20800
B49	13	100%	4849	4516	1865	726	6846
B50	13	100%	4932	4494	1880	704	6759
B7	13	100%	18665	16547	5463	3458	21817
B73	13	100%	17246	15319	5474	2303	20400
B81	13	100%	18090	16288	5537	2849	21600
B27	12	92%	18870	17316	5608	4656	22968
B44	12	92%	4247	3973	1663	789	6442
B45	12	92%	4925	4531	2053	617	7537
B60	12	92%	19765	17229	5587	3763	22640
B61	12	92%	19969	17231	5672	3672	23040
Cw2	11	84%	7699	6972	2485	1172	9300
A66	9	69%	7993	8014	4131	1101	13753
B67	8	61%	2739	2793	799	1563	4300
B42	7	53%	2409	2373	513	1721	3300
B55	7	53%	2310	2269	496	1372	2944
A6602	5	38%	11427	9116	4650	1101	13800
B2708	4	30%	14756	13680	6720	4656	20553
B72	4	30%	1933	1921	244	1620	2200
B2705	2	15%	11352	11352	7616	3736	18968
B35	2	15%	1189	1188	35	1154	1223
B40	2	15%	13574	13573	9811	3763	23384
B4005	2	15%	5082	5081	1535	3547	6616
B51	2	15%	1325	1324	17	1308	1341
B53	2	15%	1207	1206	2	1205	1208
B703	2	15%	3985	3985	1463	2522	5448
B78	2	15%	1097	1097	49	1048	1146
B12	1	7%	6090	6090	-	6090	6090
B76	1	7%	1131	1131	-	1131	1131
B8101	1	7%	2849	2849	-	2849	2849
B82	1	7%	1167	1167	-	1167	1167
Cw17	1	7%	1408	1408	-	1408	1408

Class II							
*** Serum 130 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
NEG	13	100%	-	-	-	-	-

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 14. Summary of Single Antigen results for Serum #131

Class I							
*** Serum 131 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A25	13	100%	8156	7644	3116	1392	12088
A26	13	100%	5198	5155	2214	953	8600
A32	13	100%	9184	7990	3045	1307	12044
A33	13	100%	5399	4721	1842	1058	7200
A34	13	100%	5065	5098	2044	1262	8100
A68	13	100%	8080	7551	2557	2488	10525
B18	13	100%	6416	6878	3174	1009	10900
B35	13	100%	15946	15046	5122	3562	22022
B37	13	100%	4894	4800	2182	953	8000
B54	13	100%	5900	5180	1926	884	7800
B56	13	100%	10214	9182	3241	1752	13400
B59	13	100%	6231	5808	2202	940	8900
B73	13	100%	6751	6353	2320	1073	9619
B78	13	100%	12323	11885	4283	2309	16700
Cw7	13	100%	10490	9000	3326	1406	12900
A2	12	92%	9740	9586	3620	2789	15135
A24	12	92%	6123	6656	3035	1936	11075
A29	12	92%	5780	5380	1903	1049	8120
A31	12	92%	5169	4652	1719	874	6924
A43	12	92%	4998	4820	1868	1051	7600
A66	12	92%	5437	5161	2031	1155	7902
A69	12	92%	8347	7798	3072	1858	11347
A74	12	92%	4488	4190	1546	900	6400
B38	12	92%	6156	5706	2233	864	8900
B46	12	92%	4750	4671	1605	552	6828
B49	12	92%	12809	11363	4113	2328	16600
B50	12	92%	10551	9408	3429	1805	14100
B51	12	92%	16307	14399	5746	1659	20100
B52	12	92%	7384	6996	2588	1507	10700
B53	12	92%	15725	14150	4716	3506	19300
B55	12	92%	3023	3046	1069	579	4500
B57	12	92%	11165	10279	3780	1910	14762
B58	12	92%	9381	8700	3181	1617	12600
B62	12	92%	10750	10140	3742	2078	15153
B63	12	92%	9743	8949	3301	1446	13100
B71	12	92%	10167	9491	3490	2041	14844
B72	12	92%	9500	8884	3308	1736	14100

Class II							
*** Serum 131 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DR15	13	100%	11126	10401	3248	2365	14576
DR16	13	100%	5925	5609	1825	1478	8577
DR51	13	100%	11975	11188	3138	2696	15194
DR1	11	84%	2307	2078	779	530	3471
DR9	11	84%	2868	2960	1001	1701	5217
DR103	10	76%	2112	2063	530	1257	3130
DR4	7	53%	1593	1818	590	1128	2820
DQ6	5	38%	2720	2605	749	1768	3863
DR14	2	15%	1292	1292	50	1242	1342
DQA1*01	1	7%	2932	2932	-	2932	2932

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Class I							
*** Serum 131 *** - cont.							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B75	12	92%	12862	11437	4118	1868	16200
B76	12	92%	5982	5934	2437	890	10300
B77	12	92%	12204	10715	3872	1591	15500
B8	12	92%	5047	4658	1537	652	6058
Cw17	12	92%	6024	5249	2154	709	7800
A23	11	84%	7313	7526	2853	1176	11852
B13	11	84%	3362	3319	824	2022	4444
B39	11	84%	3277	3276	1331	601	5530
B48	11	84%	3474	3646	2067	1319	9096
B67	11	84%	2605	2585	891	521	3900
A80	10	76%	2812	2663	720	1501	3700
B44	10	76%	2862	2679	967	519	3800
B45	10	76%	3399	3307	1276	503	5800
Cw15	10	76%	4595	4516	566	3393	5217
B27	8	61%	2263	2248	735	549	3068

Table 15. Summary of Single Antigen results for Serum #132

Class I							
*** Serum 132 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A25	13	100%	4854	4625	1813	827	7817
A32	13	100%	6707	6365	2463	1114	10174
B38	13	100%	6240	5983	2110	1096	9400
B49	13	100%	9394	8975	2952	1697	12914
B50	13	100%	7818	7310	2522	955	10953
B51	13	100%	5601	5291	2089	792	8227
B52	13	100%	3246	3270	1119	875	4915
B53	13	100%	5253	5082	1774	1092	7600
B59	13	100%	4484	4334	1648	928	7108
B63	13	100%	5123	5183	1958	1087	8954
B77	13	100%	4395	4422	1595	813	6600
A23	12	92%	18353	16408	5319	3896	22000
A24	12	92%	10274	9994	3488	2824	15475
B44	12	92%	3734	3548	1315	765	5497
B57	12	92%	7408	6969	2622	1333	10778
B58	12	92%	5885	5646	2121	1155	8700
B27	11	84%	2748	2633	1086	635	4892
B45	11	84%	4423	4400	1818	2030	8321
B13	10	76%	2805	2826	694	1607	3854
B62	10	76%	2203	2399	1104	503	5079
B37	9	69%	2107	2100	772	589	3238
B72	9	69%	2334	2487	413	2030	3431
Cw6	9	69%	2521	2493	627	1105	3600
B47	8	61%	2081	2118	477	1569	2900
Cw15	7	53%	2403	2565	453	2102	3400
Cw17	7	53%	1846	1760	528	522	2200
A2	6	46%	1400	1454	320	1067	2005
B56	6	46%	1624	1626	394	1075	2298
Cw18	6	46%	2205	2240	272	1937	2800
Cw5	6	46%	2509	2545	333	2166	3200
Cw2	5	38%	1669	1769	284	1408	2200
A2403	4	30%	7193	6721	3093	2164	10336
B71	4	30%	1539	2296	1492	1237	4870
B75	4	30%	1526	1615	362	1258	2153
Bw4	4	30%	5850	6382	1929	4434	9394
B2705	3	23%	2989	2708	1590	635	4500
B35	3	23%	1143	1248	172	1111	1491

Class II							
*** Serum 132 ***							
13 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DP14	13	100%	10314	9656	2880	2768	14414
DP17	13	100%	10438	9843	2994	2324	14596
DP18	13	100%	13541	12767	3431	4088	17701
DP28	13	100%	12652	12178	3227	3751	16590
DPw2	13	100%	15769	14894	4266	3895	20749
DPw3	13	100%	10530	10247	2829	3384	14703
DPw6	13	100%	10366	9650	2597	2953	13649
DQ2	13	100%	13384	14387	5186	2107	21831
DR11	13	100%	11341	11006	2992	3464	15536
DR12	13	100%	15360	14540	4575	1895	19656
DR53	13	100%	9263	9086	2623	2016	13095
DR7	13	100%	23638	22491	4713	9112	28354
DR9	13	100%	11000	12321	4168	2622	19441
DP9	12	92%	11756	10803	3109	2750	14100
DR52	12	92%	18838	17189	5453	2429	23940
DP10	11	84%	12043	11773	1938	6885	15059
DP20	11	84%	11817	11956	2213	6681	16186
DP402	7	53%	15239	15248	1309	13495	17000
DPw4	6	46%	11994	11746	4788	3911	18761
DQA1*05	1	7%	1007	1007	-	1007	1007

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 16a. Individual laboratory results for Serum #129 - class I by One Lambda Single Antigen

**** Serum 129 ****																						
Ctr	B13	B47	B76	B82	A1	B41	B44	B45	B49	B50	B60	B61	Cw15	Cw6	A23	Cw18	Cw2	Cw5	A24	Cw17	Other	Manufacturer
230	14878	8460	20178	13981	7933	12680	20172	24982	13769	13249	11545	12299			4862						B4005	One lambda
774	10100	5647	16186	11456	4010	7971	17913	20147	9512	9283	7581	7801										One lambda
792	7609	4780	11689	8064	3692	6665	13285	14621	7319	7302	6414	6575	1510		1887							One lambda
1426	7532	4739	13797	9391	2859	6505	13784	17164	7430	7551	6137	5759	2476	2335	1286	1994	1573	2367		1443	Cw16,B4005	One lambda
2400	13207	9024	18742	14071	8056	11451	19136	22248	13106	13004	10645	10748	2806	3212	4923	2709	2210	2597	3929			One lambda
3224	12083	6778	16996	12625	6763	9971	18716	20250	10972	10850	8794	10084	3039	3057	3961	2664	2190	2771	3304	1787	B62,B56,B72	One lambda
3753	7372	4591	16736	11065	2588	7219	16590	19846	8084	8133	6054	6052	3193	3070		2494	2066	2791				One lambda
5214	11300	7000	19400	13800	7000	10400	18300	21400	11300	11300	9500	9100	4100	3800	4000	3000	2300	3600				One lambda
8001	14778	10008	20643	14817	8351	13291	22345	23195	15051	14154	12723	13478	3493	3511	4308	3025	2253	3080	3233	2123	B62,B75,B56,B72	One lambda
8050	6826	4007	13747	9449	1894	6133	13904	16567	6914	7115	5816	5483	2174	1954		1692	1183	1865				One lambda
8083	14175	8543	19898	14374	7666								3862	4058		3237	2266	3275		2172	A9,B21,B12	One lambda
Avg	10896	6688.8	17092	12099	5528	9228.6	17415	20042	10346	10194	8520.9	8737.9	2961	3125	3604	2602	2005	2793	3489	1881		
Std																						
Dev.S	3167.5	2080.2	3004.2	2351.2	2511	2676.5	2997	3177.9	2944.5	2676.5	2511.2	2855.2	824.3	705.7	1439	529.9	407	541	383	338.6		
MFI																						
%CV	29%	31%	18%	19%	45%	29%	17%	16%	28%	26%	29%	33%	28%	23%	40%	20%	20%	19%	11%	18%		

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 16b. Individual laboratory results for Serum #129 - class I by Lifecodes-Immucor

**** Serum 129 ****																						
Ctr	B13	B47	B76	B82	A1	B41	B44	B45	B49	B50	B60	B61	Cw15	Cw6	A23	Cw18	Cw2	Cw5	A24	Cw17	Other	Manufacturer
8029	2427	2303	6361	6873	1086	2226	7783	7615	2733	2664	2238	2261		562	854				834			Lifecodes
8103	839	743	2859	3026		965	3509	2870	1110	1030	812	4101									B40,B15	Lifecodes
Avg	1633	1523	4610	4950	1086	1596	5646	5243	1922	1847	1525	3181	-	562	854	-	-	-	834	-		
Std																						
Dev.S	1123	1103	2476	2720	-	892	3022	3355	1148	1155	1008	1301	-	-	-	-	-	-	-	-		
MFI																						
%CV	69%	72%	54%	55%	-	56%	54%	64%	60%	63%	66%	41%	-	-	-	-	-	-	-	-		

Table 17a. Individual laboratory results for Serum #130 - class I by One Lambda Single Antigen

**** Serum 130 ****																									
Ctr	B13	B41	B47	B48	B49	B50	B7	B73	B81	B27	B44	B45	B60	B61	Cw2	A66	B67	B42	B55	A6602	B2708	B72	Other	Manufacturer	
230	17087	10583	17709	18124	6549	6759	19667	19198	19343	21311	5885	7537	20050	20220						12464			B4005	One lambda	
774	19384	7964	15448	16549	4422	4318	18315	15912	18090	17867	4136	4647	19480	20426	7699	9202	2073	1721	1969		19737				One lambda
792	13014	5019	10174	11041	3024	3084	11707	10440	12164	12956	2784	3009	12673	13537	3662	6223									One lambda
1426	16327	7767	13684	14900	4265	3978	16979	17246	16716	17539	3327	3913	18290	16936	7594	7993	2876	2409	2464				Cw17,B4005	One lambda	
2400	19742	10206	16736	18137	5805	5961	19436	18178	19305	19872	5203	5843	20445	19734	9116	12923	3126	2604	2796			2120			One lambda
3224	20893	8408	16551	17075	5232	5280	18665	16914	18480		5133	5297	20103	21219	8117		2601	2184	2310	11427	20553	1745	B78,B51,B53,B35 >	One lambda	
3753	17419	6960	15920	15555	4849	4932	18891	19129	17938	20949	4358	5202	20461	20203	7451		1563		1372	6791					One lambda
5214	20800	11000	19400	20800	6200	6200	21800	20400	21600	22000	5100	6400	22400	22000	9300		4300	3300		13800		2200			One lambda
8001	22479	9597	19192	20665	6846	6491	21817	19979	21423	22388	6442	6865	22640	23040	9159	13753	2348	1750	2032			1620	B78,B51,B53,B82 >	One lambda	
8050	15152	5166	13281	14480	3816	3629	15686	14460	16010	17050	3068	3886	17760	17599	4987	5353									One lambda
8083	22073	10081	18576	19433	5868	5972	21274	19124	21182	22968					8441	12087	3461	2649	2944				B40,B12	One lambda	
Avg	18579	8432	16061	16978	5171	5146	18567	17362	18386	19490	4544	5260	19430	19491	7553	9648	2794	2374	2270	11121	20145	1921.3			
Std																									
Dev.S	3018	2088	2813	2914	1208	1246	2973	2915	2767	3118	1222	1436	2825	2777	1854	3333	854	554	536	3045	577	282.26			
MFI																									
%CV	16%	25%	18%	17%	23%	24%	16%	17%	15%	16%	27%	27%	15%	14%	25%	35%	31%	23%	24%	27%	3%	15%			

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 17b. Individual laboratory results for Serum #130 - class I by Lifecodes-Immucor

**** Serum 130 ****																									
Ctr	B13	B41	B47	B48	B49	B50	B7	B73	B81	B27	B44	B45	B60	B61	Cw2	A66	B67	B42	B55	A6602	B2708	B72	Other	Manufacturer	
8029	7025	1250	8009	2151	1117	1118	7418	5875	6644	8239	1456	1158	8686	8193	1172	3492					9775		B703	Lifecodes	
8103	2822	875	3273	944	726	704	3458	2303	2849	4656	789	617	3763	3672		1101				1101	4656		B40,B703,B8101 >	Lifecodes	
Avg	4924	1063	5641	1548	922	911	5438	4089	4747	6448	1123	888	6225	5933	1172	2297	-	-	-	1101	7216	-			
Std																									
Dev.S	2972	265	3349	853	276	293	2800	2526	2683	2534	472	383	3481	3197	-	1691	-	-	-	-	3620	-			
MFI																									
%CV	60%	25%	59%	55%	30%	32%	51%	62%	57%	39%	42%	43%	56%	54%	-	74%	-	-	-	-	50%	-			

Table 18a. Individual laboratory results for Serum #131 - class I by One Lambda Single Antigen

**** Serum 131 ****																										
Ctr	A25	A26	A32	A33	A34	A68	B18	B35	B37	B54	B56	B59	B73	B78	Cw7	A2	A24	A29	A31	A43	A66	A69	A74	B38	B46	
230	12088	8600	12044	7039	7654	10438	9733	22022	6626	6319	12065	8147	9619	16351	12491	15135	11075	8120	6924	7314	7628	11298	6115	7245	4697	
774	7454	4830	8797	4839	4798	7124	6272	15420	4501	6071	9916	6231	6720	11745	9691	9365	5722	5345	4524	4346	5463	8011	4193	6816	5249	
792	6288	4282	6518	3930	4590	6803	6416	12614	4894	4503	7560	5135	5265	10942	7343	8504	6524	4304	3805	3757	4573	6639	3217	5025	3898	
1426	5540	3874	6668	3139	3379	4818	4870	13502	3651	5337	8777	5517	5094	9269	7117	6993	4252	3739	2996	3514	3654	5751	3043	5561	4644	
2400	9902	7410	9827	6709	7207	10525	10423	18289	7525	7052	11528	7646	7773	14366	11164	12399	9902	6979	6198	6771	6978	11347	5793	7992	6828	
3224	9323	6235	9192	5687	6472	9038	8641	16363	5019	5969	10232	6757	6856	13734	10490	11965	9263	6121	5293	5697		9772	4759	6750	5515	
3753	8156	5198	9184	5399	5065	8080	5159	15946	3075	5018	10214	5758	8125	12323	10909	10115	5273	5744	5183	4737	5410	8682	4630	5561	4539	
5214	11900	8200	11600	7200	8100	9900	10900	20000	8000	7800	13400	8900	9200	16700	12900	13100	9700	7900	6900	7600	7902	10700	6400	8900	6400	
8001	9240	5994	9495	5591	6035	9900	9456	19017	6337	5900	10591	6582	6751	15725	10713		9795	5815	5155	5259	6312	10719	4541	6949	4803	
8050	4860	2728	6234	2883	2467	5357	4152	13212	2783	3838	8135	4567	5787	9859	7986	7099	3381	3563	2711	2454	2907	5607	2257	4762	2964	
8083	9966	6397	10102	5588	6383	9557	10310	19362	7266	6822	11849	7364	7587	16251	11417	13181		5882	5269	5350	6888		4435		5974	
Avg	8610.6	5795	9060.1	5273	5650	8321.8	7848.4	16886	5425	5875	10388	6600	7162	13388	10202	10786	7488.7	5774	4996	5164	5772	8852.6	4489	6556	5046	
Std																										
Dev.S	2403.2	1831	1936.3	1468	1769	2030.2	2511.3	3085.8	1835	1153	1769.4	1330	1480	2715.1	1965.4	2782	2755.9	1516	1410	1624	1678	2254.3	1299	1326	1113	
MFI																										
%CV	28%	32%	21%	28%	31%	24%	32%	18%	34%	20%	17%	20%	21%	20%	19%	26%	37%	26%	28%	31%	29%	25%	29%	20%	22%	

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 18b. Individual laboratory results for Serum #131 - class I by Lifecodes-Immucor

**** Serum 131 ****																										
Ctr	A25	A26	A32	A33	A34	A68	B18	B35	B37	B54	B56	B59	B73	B78	Cw7	A2	A24	A29	A31	A43	A66	A69	A74	B38	B46	
8029	3275	2326	2913	2315	2869	4144	2076	6289	1772	1839	3349	1967	2750	4943	3380	4393	3052				3066	3201		2053		
8103	1392	953	1307	1058	1262	2488	1009	3562	953	884	1752	940	1073	2309	1406	2789	1936	1049	874	1051	1155	1858	900	864	552	
Avg	2334	1640	2110	1687	2066	3316	1543	4926	1363	1362	2551	1454	1912	3626	2393	3591	2494	1049	874	1051	2111	2530	900	1459	552	
Std																										
Dev.S	1331	971	1136	889	1136	1171	754	1928	579	675	1129	726	1186	1863	1396	1134	789	-	-	-	1351	950	-	841	-	
MFI																										
%CV	57%	59%	54%	53%	55%	35%	49%	39%	43%	50%	44%	50%	62%	51%	58%	32%	32%	-	-	-	64%	38%	-	58%	-	

Table 18a. Individual laboratory results for Serum #131 - class I by One Lambda Single Antigen, cont.

**** Serum 131 ****																									
Ctr	B49	B50	B51	B52	B53	B55	B57	B58	B62	B63	B71	B72	B75	B76	B77	B8	Cw17	A23	B13	B39	B48	B67	A80	B44	B45
230	15359	12604	19086	8944		4348	14762	11999	15153	12833	14844	11579	15185	7722	13118	6048		11852	4444	5530	9096				
774	13031	10982	17030	7614	15515	2986	11396	9683	10915	10196	10492	9519	13292	6005	12342	4981	6573	7313	3165	3277	2349	2605	2377	3412	3807
792	9559	8223	14210	6454	12383	2592	8811	7669	8748	7813	8139	8045	10422	5612	9492	3888	4042	6405	2848	2755	2725	2259	2037	2640	2662
1426	10777	9618	12540	6202	12658	2654	9281	7773	8698	9124	9031	8747	10813	5259	10295	3332	5058	5976	2426	2850	2146	2317	1646	2469	3246
2400	14487	11723	17845	9853	17721	4219	12776	11382	13098	11139	11903	11331	14227	8561	14044	6058	6921	9644	4264	4390	4635	3707	3516	3435	4112
3224	12606	10570	17826	8360	16202	3482	11929	10394	12188	10112	10704	10806	13714	6896	12478	5112	6275	8732	3731	3759	3566	3019	2933	3528	3551
3753	13012	10532	15583	7153	15935	2720	10933	9079	10585	9374	9842	9481	12432	5959	12065	4625	7475	6628	2159	2612	1617	2527	2764	2367	3674
5214	16600	14100	20100	10700	19300	4500	14700	12600	15000	13100	13800	14100	16200	10300	15500	6000	7800	10600	4100	5000	4900	3900	3700	3800	5800
8001	13516	10773	19956	8648	18518	3059	13249	10796	11901	10840	10985	10521	14285	7013	13435	5585	6093	9511	3362	3370	3474	2757	2859	3083	3243
8050	10991	8623	13111	5621	12822	1825	9539	7916	8807	7747	7958	7273	10210	4537	9792	3577	4723	4950	2022	1900	1319	1702	1501	1540	2475
8083					18714	3593											6046	5954		3993		4287	3131	3300	
Avg	12994	10775	16729	7954.9	15977	3271	11738	9929.1	11509	10228	10770	10140	13078	6786.4	12256	5023	6091.4	8161.1	3319	3544	3647	2792	2663	2919	3619
Std																									
Dev.S	2159.6	1761.5	2752.1	1642.9	2628.6	841.4	2147.9	1797.8	2418.4	1831.5	2258.4	1975.6	2061.3	1716	1929.4	1041	1199.4	2240	864	1135	2168	669.6	759	722	971.3
MFI																									
%CV	17%	16%	16%	21%	16%	26%	18%	18%	21%	18%	21%	19%	16%	25%	16%	21%	20%	27%	26%	32%	59%	24%	29%	25%	27%

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 18b. Individual laboratory results for Serum #131 - class I by Lifecodes-Immucor, cont.

**** Serum 131 ****																									
Ctr	B49	B50	B51	B52	B53	B55	B57	B58	B62	B63	B71	B72	B75	B76	B77	B8	Cw17	A23	B13	B39	B48	B67	A80	B44	B45
8029	4095	3351	3842	2900	6530		4065	3501	4514	3668	4159	3471	4598	2461	4438		1375								
8103	2328	1805	1659	1507	3506	579	1910	1617	2078	1446	2041	1736	1868	890	1591	652	709	1176		601		521		519	503
Avg	3212	2578	2751	2204	5018	579	2988	2559	3296	2557	3100	2604	3233	1676	3015	652	1042	1176	-	601	-	521	-	519	503
Std																									
Dev.S	1249	1093	1544	985	2138	-	1524	1332	1723	1571	1498	1227	1930	1111	2013	-	471	-	-	-	-	-	-	-	-
MFI																									
%CV	39%	42%	56%	45%	43%	-	51%	52%	52%	61%	48%	47%	60%	66%	67%	-	45%	-	-	-	-	-	-	-	-

Table 18a. Individual laboratory results for Serum #131 - class I by One Lambda Single Antigen, cont.

**** Serum 131 ****																						
Ctr	Cw15	B27	B61	B42	Cw12	A11	B41	Cw6	B2705	B47	B60	B81	Cw1	A1	A2403	B64	B7	B82	Cw18	Other	Manufacturer	
230																				B4005	One lambda	
774	5190	2650																			One lambda	
792	3393	2009	1686		2433	1955															One lambda	
1426	4406	2204	1360	1325	1374	1217	1351	1362		1225			1737			1231			1242	Cw5,B4005	One lambda	
2400	5217	3068	2538	2476	3688	2742	2207	2747			2225	2436									One lambda	
3224	4253		2242	2001	2786		1595	2003	2679	1376	1578	1777	1119	1760	7897	1322	1572	1090	1539	A36,Cw2,A1101,A1102 >	One lambda	
3753	4590	2214	1350	1444			1185			1136		1248					1286				A1102	One lambda
5214	4600		2400	2400	3700	3200	2200	2600	3800		2000			2500		2000					Bw4	One lambda
8001	4781	2312	2070	1763	3069	2513	1538	1631		1232	1534	1683	1349	1536			1430	1013	1239		A36,Bw4	One lambda
8050	3741								1538				1051									One lambda
8083	4995	2980	2417	2198	3187	3165		2112													A9,B15,B70,B21 >	One lambda
Avg	4516.6	2491	2008	1944	2891	2465	1679	2076	2672.3	1242	1834	1786	1314	1932	7897	1518	1429	1052	1340			
Std																						
Dev.S	596.37	412.5	481	452	809.4	765	431	537	1131	99.3	335	491	309	504	-	420	143	54.45	172.3			
MFI																						
%CV	13%	17%	24%	23%	28%	31%	26%	26%	42%	8%	18%	27%	24%	26%	-	28%	10%	5%	13%			

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 18b. Individual laboratory results for Serum #131 - class I by Lifecodes-Immucor, cont.

**** Serum 131 ****																						
Ctr	Cw15	B27	B61	B42	Cw12	A11	B41	Cw6	B2705	B47	B60	B81	Cw1	A1	A2403	B64	B7	B82	Cw18	Other	Manufacturer	
8029															2841						A203	Lifecodes
8103		549							549						1563			502			A203,B15,B7801,A6601 >	Lifecodes
Avg	-	549	-	-	-	-	-	-	549	-	-	-	-	-	2202	-	-	502	-			
Std																						
Dev.S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	904	-	-	-	-			
MFI																						
%CV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41%	-	-	-	-			

Table 19a. Individual laboratory results for Serum #132 - class I by One Lambda Single Antigen

**** Serum 132 ****																											
Ctr	A25	A32	B38	B49	B50	B51	B52	B53	B59	B63	B77	A23	A24	B44	B57	B58	B27	B45	B13	B62	B37	B72	Cw6	B47	Cw15	Cw17	
230	7817	10174	7357	12914	10953	8227	4915	7190	7108	8954	6386	21914	15475	5497	10778	8380	4892	8321		5079							
774	5494	7807	8038	11477	10229	7076	4362	7005	5586	6855	5898	20040	10885	4862	9055	7490	3332	6401	3854	3135	3106	3431		2538			
792	2794	3571	3707	5921	4918	3301	1934	2888	2502	2895	2472	12276	7083	2189	4168	3180	1601	2814	1607								
1426	4779	6707	7031	10539	8789	6173	3842	5815	5021	5969	5441	18037	9126	4002	7776	6361	3445	5531	3201	2605	3238	2661	2692	2558	2403	2108	
2400	4881	6351	6145	9113	7818	5088	3154	5253	4094	5249	4382	18669	10656	3465	6790	5463	2774	4423	2604	2089	2345	2330	2337				
3224	4854	6803	6394	9394	7830	5601	3257	5358	4403	5010	4570	19397	12435	4116	7301	5975		4439	2962	2083		2334	2521	1987	2102	1765	
3753	5001	7480	5866	8985	6565	5681	3246	4907	4500	5090	4373	17001	9892	3113	6906	5582	2748	2806	2113	1849	1708	2030	2739	1611	2997	2069	
5214	7200	9500	9400	12200	9100	8000	4900	7600	6700	7400	6600	22000	14100	5000	10200	8700		5200	3800	2500	2500	2700	3600	2900	3400	2200	
8001	5593	7509	7266	10472	8489	6161	3830	6054	4889	5840	5295	20220	13538	4400	8165	6503	3171	4119	3268	2316	2107	2667	2383	2174	2179	1810	
8050	4072	6597	6240	9618	7086	5585	3232	4879	4484	5123	4395	14523	6579	2918	7515	5795	2336	2325	2205	1840	1625	2048	2884	1569	2694	1846	
8083	4611	6537	6099	9055	7603	5203	2876	4958	3898	4902	4351						2515		2647			2188	2184		2184		
Avg	5191	7185.1	6686	9971.6	8125.5	6009	3595	5628	4835	5753	4924	18408	10977	3956	7865.4	6343	2979	4638	2826	2611	2376	2488	2668	2191	2566	1966	
Std																											
Dev.S	1376	1725.4	1434	1894.2	1679.3	1391	893.8	1330	1286	1574	1168	3109.1	2941.8	1036	1874.8	1593	912.5	1831	732	1012	629.1	438	442	503.81	489.1	181.5	
MFI																											
%CV	27%	24%	21%	19%	21%	23%	25%	24%	27%	27%	24%	17%	27%	26%	24%	25%	31%	39%	26%	39%	26%	18%	17%	23%	19%	9%	

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 19b. Individual laboratory results for Serum #132 - class I by Lifecodes-Immucor

**** Serum 132 ****																											
Ctr	A25	A32	B38	B49	B50	B51	B52	B53	B59	B63	B77	A23	A24	B44	B57	B58	B27	B45	B13	B62	B37	B72	Cw6	B47	Cw15	Cw17	
8029	2208	2606	3151	5294	4699	1902	2095	3075	2237	3016	2515	8928	7337	2252	3645	3176	1523	2030			1688		1105	1611			
8103	827	1114	1096	1697	955	792	875	1092	928	1087	813	3896	2824	765	1333	1155	635			503	589					522	
Avg	1518	1860	2124	3496	2827	1347	1485	2084	1583	2052	1664	6412	5081	1509	2489	2166	1079	2030	-	503	1139	-	1105	1611	-	522	
Std																											
Dev.S	977	1055	1453	2543	2647	785	863	1402	926	1364	1203	3558	3191	1051	1635	1429	628	-	-	-	777	-	-	-	-	-	
MFI																											
%CV	64%	57%	68%	73%	94%	58%	58%	67%	58%	66%	72%	55%	63%	70%	66%	66%	58%	-	-	-	68%	-	-	-	-	-	

Table 19a. Individual laboratory results for Serum #132 - class I by One Lambda Single Antigen, cont.

**** Serum 132 ****															
Ctr	A2	B56	Cw18	Cw5	Cw2	A2403	B71	B75	Bw4	B2705	B35	B41	B61	Other	Manufacturer
230							4870							B48,B4005	One lambda
774	2005	2298				8606		2153							One lambda
792															One lambda
1426	1464	1857	2246	2438	1980		1629	1738			1491	1386	1634	B48,A34,Cw16,B4005	One lambda
2400															One lambda
3224	1336	1595	2188	2274	1588	10336	1237	1313	9394	2989	1111	1142	1069	A68,A69	One lambda
3753	1158	1279	2048	2615					4434						One lambda
5214			2800	3200	2200				6700	4500					One lambda
8001	1696	1652	1937	2166	1408		1449	1258			1143	1374	1318	B60,A68,A69	One lambda
8050	1067	1075	2221	2579	1669				5000						One lambda
8083														A9,B12,B17	One lambda
Avg	1454	1626	2240	2545	1769	9471	2296	1616	6382	3744.5	1248	1301	1340		
Std															
Dev.S	350	431	298.5	364	318	1223.3	1723	418	2227	1068.4	211	138	283		
MFI															
%CV	24%	27%	13%	14%	18%	13%	75%	26%	35%	29%	17%	11%	21%		

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 19b. Individual laboratory results for Serum #132 - class I by Lifecodes-Immucor, cont.

**** Serum 132 ****															
Ctr	A2	B56	Cw18	Cw5	Cw2	A2403	B71	B75	Bw4	B2705	B35	B41	B61	Other	Manufacturer
8029						5779									Lifecodes
8103						2164				635				B15	Lifecodes
Avg	-	-	-	-	-	3972	-	-	-	635	-	-	-		
Std															
Dev.S	-	-	-	-	-	2556	-	-	-	-	-	-	-		
MFI															
%CV	-	-	-	-	-	64%	-	-	-	-	-	-	-		

Table 20a. Individual laboratory results for Serum #129 - 130 - class II by One Lambda Single Antigen

**** Serum 129 ****								**** Serum 130 ****		
Ctr	DR4	DQ7	DQ8	DQ9	DR53	DQA1*03	Other	Ctr	Other	Manufacturer
230	7833	9556	8470	7703	4224	11247	DQA1*05,DQA1*06	230	NEG	One Lambda
774	5480	8222	6912	6671	2498			774	NEG	One Lambda
792	4532	6160	5314	4890	1911			792	NEG	One Lambda
1426	3340	5458	4343	3997	1922			1426	NEG	One Lambda
2400	7556	8331	7044	6876	3415			2400	NEG	One Lambda
3224	7078	9912	8475	8219	2851	8475		3224	NEG	One Lambda
3753	4797	6087	4948	4669	2239			3753	NEG	One Lambda
5214	5400	7000	5700	5200	2700			5214	NEG	One Lambda
8001	6958	9009	8396	7992	2945	1113		8001	NEG	One Lambda
8050	4878	5862	4891	4693	2308			8050	NEG	One Lambda
8083	7182				3223		DQ3	8083	NEG	One Lambda
Avg	5912	7560	6449	6091	2749	6945		Avg	-	
Std Dev.S	1474	1646	1616	1574	693	5237		Std Dev.S	-	
MFI %CV	25%	22%	25%	26%	25%	75%		MFI %CV	-	

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 20b. Individual laboratory results for Serum #129 - 132 - class II by Lifecodes-Immucor

**** Serum 129 ****								**** Serum 130 ****		
Ctr	DR4	DQ7	DQ8	DQ9	DR53	DQA1*03	Other	Ctr	Other	Manufacturer
8029	2623	1202	1182	1152				8029	NEG	Lifecodes
8103	1332	865	958	698			DQ3	8103	NEG	Lifecodes
Avg	1978	1034	1070	925	-	-		Avg	-	
Std Dev.S	913	238	158	321	-	-		Std Dev.S	-	
MFI %CV	46%	23%	15%	35%	-	-		MFI %CV	-	

Table 21a. Individual laboratory results for Serum #131 - class II by One Lambda Single Antigen

**** Serum 131 ****										
Ctr	DR15	DR16	DR51	DR1	DR9	DR103	DR4	DQ6	Other	Manufacturer
230	14480	8577	12218							One Lambda
774	11330	5925	13643	2471	3420	2132			DQA1*01	One Lambda
792	7290	3830	8293		1701					One Lambda
1426	8176	3705	8559	1755	2261	1591	1593		DR14	One Lambda
2400	12299	7053	12800	2734	3445	2577	2361	2767		One Lambda
3224	11126	6042	11975	2307	2868	2091				One Lambda
3753	10463	5437	11096	1603	2388	1601	1320	1910		One Lambda
5214	12100	6500	12600	2400	3600	2200				One Lambda
8001	13121	6895	14655	2723	3741	2412	2175	2720	DR14	One Lambda
8050	10427	5309	10844	1326	2146	1257	1329	1768		One Lambda
8083	14576	7706	15194	3471	5217	3130	2820	3863		One Lambda
Avg	11399	6089	11989	2310	3079	2110	1933	2606		
Std										
Dev.S	2303	1497	2208	662	1027	572	614	838		
MFI										
%CV	20%	25%	18%	29%	33%	27%	32%	32%		

Blue = DSA against cell #127 only

Gold = DSA against cell #128 only

Green = DSA against cell #127 and #128

Table 21b. Individual laboratory results for Serum #131 - class II by Lifecodes-Immucor

**** Serum 131 ****										
Ctr	DR15	DR16	DR51	DR1	DR9	DR103	DR4	DQ6	Other	Manufacturer
8029	7467	4467	10882	1542	1779	1642	1128			Lifecodes
8103	2365	1478	2696	530						Lifecodes
Avg	4916	2973	6789	1036	1779	1642	1128			
Std										
Dev.S	3608	2114	5788	716	-	-	-	-		
MFI										
%CV	73%	71%	85%	69%	-	-	-	-		

Table 22a. Individual laboratory results for Serum #132 - class II by One Lambda Single Antigen

**** Serum 132 ****																					
Ctr	DP14	DP17	DP18	DP28	DPw2	DPw3	DPw6	DQ2	DR11	DR12	DR53	DR7	DR9	DP9	DR52	DP10	DP20	DP402	DPw4	Other	Manufacturer
230	14414	14596	17701	16590	20749	14703	13649	17134	15536	19656	13095	23380	13326		21390	15059	16186		18761		One Lambda
774	9564	10141	13840	12501	15615	10530	10366	18553	11102	15027	9972	23256	15213	11317	19137	10759	11602	13495			One Lambda
792	6016	6170	8783	7996	9766	6655	5858	13187	7067	10291	6853	18011	10820	7081	12996	6885	6681		9131		One Lambda
1426	11348	11390	13177	12817	15701	11920	11151	13041	12606	15805	9211	25845	9803	13302	17856	12043	12940		14372		One Lambda
2400	10455	10686	13548	12652	16322	10934	10480	13384	11767	15380	9826	23894	10540	12080	18343	11792	11629		14689		One Lambda
3224	9603	10094	12684	12713	15536	10386	9579	18776	10897	15332	9263	24433	15803	11017	18687	10589	10608	13802			One Lambda
3753	10176	10292	12994	12052	15769	10215	9631	13040	10953	15360	9132	23638	10366	11590	19048	11607	11118	14455			One Lambda
5214	12500	12700	15300	14400	17800	12900	11900	13000	13600	18400	9200	23500	11000	14100		13400	13900	17000			One Lambda
8001	10849	11171	15632	14906	17235	11754	10453	21831	12664	18353	11351	24129	19441	12843	21379	12517	12576	15827		DQA1*05	One Lambda
8050	10314	10438	13541	12635	16874	10422	9581	14208	11341	15211	10189	26411	10274	11922	18989	12322	11817	15239			One Lambda
8083	10905	11066	15502	15233	18170	12036	11180	21144	13356	18277	11309	28354	18492	13288	23940	12539	12463	16921			One Lambda
Avg	10559	10795	13882	13136	16322	11132	10348	16118	11899	16099	9946	24077	13189	11854	19177	11774	11956	15248	14238		
Std																					
Dev.S	2055	2033	2263	2232	2667	2001	1911	3468	2134	2553	1600	2560	3514	1946	2855	2032	2321	1414	3948		
MFI																					
%CV	19%	19%	16%	17%	16%	18%	18%	22%	18%	16%	16%	11%	27%	16%	15%	17%	19%	9%	28%		

Blue = DSA against cell #127 only
 Gold = DSA against cell #128 only
 Green = DSA against cell #127 and #128

Table 22b. Individual laboratory results for Serum #132 - class II by Lifecodes-Immucor

**** Serum 132 ****																					
Ctr	DP14	DP17	DP18	DP28	DPw2	DPw3	DPw6	DQ2	DR11	DR12	DR53	DR7	DR9	DP9	DR52	DP10	DP20	DP402	DPw4	Other	Manufacturer
8029	6627	6899	9193	10077	10199	7377	8673	7638	8725	10042	6701	18422	12478	8353	12081				9616		Lifecodes
8103	2768	2324	4088	3751	3895	3384	2953	2107	3464	1895	2016	9112	2622	2750	2429				3911		Lifecodes
Avg	4698	4612	6641	6914	7047	5381	5813	4873	6095	5969	4359	13767	7550	5552	7255	-	-	-	6764		
Std																					
Dev.S	2729	3235	3610	4473	4458	2823	4045	3911	3720	5761	3313	6583	6969	3962	6825	-	-	-	4034		
MFI																					
%CV	58%	70%	54%	65%	63%	52%	70%	80%	61%	97%	76%	48%	92%	71%	94%	-	-	-	60%		

Paper Challenge

Table 23. Individual Virtual crossmatch results for Serum #131 vs Donor# V1

Donor #V1 HLA genotype: A*02:01-A*26:01-B*27:05-B*51:08-C*02:02-C*16:02-DRB1*13:01-DRB1*15:01-DRB3*01:01-DRB5*01:01-DQA1*01:02:01G-DQA1*01:03-DQB1*06:02-DQB1*06:03-DPA1*01:03-DPB1*04:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	131	100	Positive	B51(14273) A26(5665) B2705(2505)	Positive	DR51(10497) DQ6(1921) DP15(9494)	Unacceptable	Serum131 has self to: A2=10,659; B8=4,176; B64=1,169; Cw7=9,099
230	131	72%	Positive	A2(15135) B27(3254) B51(18086) A26(8600)	Positive	DR15(14480) DR51(12218)	Unacceptable	
774	131	100	Positive	A2(9228) B27(2650) B51(17030) A26(4830)	Positive	DR15(10932) DR51(13643) DQA1*01(2932)	Unacceptable	
792	131	100	Positive	A2(8504) B27(2009) B51(14210) A26(4282)	Positive	DR15(7290) DR51(8293)	Unacceptable	
1426	131	100%	Positive	A2(7827) B27(2032) B51(12368) A26(3702) Cw16(1210)	Positive	DR15(7646) DR51(9244) DQ6(1803)	Unacceptable	
1461	131	47	Positive	A2(2403) B51(2763) A26(1304)	Positive	DR15(2980)	Unacceptable	
2400	131	100%	Positive	A2(12452) B51(16834) A26(7287) B2705(2985)	Positive	DR15(12339) DR51(13506) DQ6(1983)	Unacceptable	
3224	131	100%	Positive	A2(11965) B51(17826) A26(6235) Cw2(1007) B2705(2679)	Positive	DR15(11126) DR51(11975) DQ6(2463)	Unacceptable	
3753	131	99.98%	Positive	B27(2214) B51(15583) A26(5198)	Positive	DR15(10463) DR51(11096)	Unacceptable	Additional allele-specific antibodies detected: DQB1*06:02(1148 MFI), DQB1*06:03(2672 MFI)
3966	131	95%	Positive	B27(1937) B51(12251) A26(4069)	Positive	DR15(8429) DR51(8500) DQ6(1436) DQA1*01(1750)	Unacceptable	
8001	131	100	Positive	B27(2312) A26(5994) Cw2(781)	Positive	DR15(12720) DR51(14655) DQ6(2720)	Unacceptable	B*51:08, C*16:02 are not included on LSAB panel. A*02:01 [MFI=13330] is patient's antigen
8029	131	45%	Positive	A2(4393) B51(3842) A26(2326)	Positive	DR15(7467) DR51(10882)	Unacceptable	
8050	131	99.83	Positive	A2(7099) B51(13111) A26(2728) B2705(1538)	Positive	DR15(10427) DR51(10844) DQ6(1768)	Unacceptable	DQ6 DSA allele-specific (DQB1*06:02 and 06:03)
8080	131	100	Positive	B27(2712) B51(18709) A26(7174) Cw16(1542)	Positive	DR15(12485) DR51(13526) DQ6(3035)	Unacceptable	A2 self-reactivity MFI 14169 not reported as DSA
8083	131	99.98	Positive	A2(13181) B27(2980) A26(6397)	Positive	DR15(14576) DR51(15194) DQ6(3863)	Unacceptable	Possible DSA to B*51:08 due to positive reaction to B*51:01 (MFI=18160) and B*51:02 (MFI=20334). No bead for B*51:08 to confirm. Also due to expression of Class I on B cells
8103	131	30	Positive	A2(2602) B27(549) B51(1659) A26(953) B2705(549)	Positive	DR15(2365) DR51(2696)	Unacceptable	
8111	131	99	Positive	A2(10100) B27(2200) B51(14700) A26(5600)	Positive	DR15(9800) DR51(10400) DQ6(1600)	Unacceptable	

Table 24. Individual Virtual crossmatch results for Serum #131 vs Donor# V2

Donor #V2 HLA genotype: A*02:03-A*24:07-B*07:06-B*46:01-C*01:02-C*07:02-DRB1*12:01-DRB1*14:04-DRB3*01:01-DQA1*01:04-DQA1*05:06-DQB1*03:01-DQB1*05:03-DPA1*02:02-DPB1*05:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	131	100	Positive	A24(7934) A203(9689) B7(1256) B46(4760)	Positive	No class II DSA	Unacceptable	Positive due to Class I DSA
230	131	77	Positive	A24(11075) A2(15135) B46(4697) Cw7(12491)	Negative	No class II DSA	Unacceptable	
774	131	100	Positive	A203(8478) Cw7(9691)	Positive	No class II DSA	Unacceptable	
792	131	100	Positive	A24(6524) A2(8212) B46(3898)	Positive	No class II DSA	Unacceptable	C*07 antibodies are considered self, not listed as DSA
1426	131	100%	Positive	A24(4080) A2(7827) B46(4360) Cw1(1488) Cw7(6883)	Positive	No class II DSA	Unacceptable	
1461	131	47	Positive	A24(1755) A203(2467) B46(640) Cw7(1574)	Positive	No class II DSA	Unacceptable	
2400	131	100%	Positive	A24(10345) A2(12133) B7(1987) B46(6567) Cw1(1549) Cw7(10979)	Positive	No class II DSA	Unacceptable	Positive due to Class I abs.
3224	131	100%	Positive	A24(9263) A2(11965) B7(1572) B46(5515) Cw1(1119) Cw7(10490)	Positive	No class II DSA	Unacceptable	
3753	131	99.98%	Positive	A24(5273) B7(1286) B46(4539)	Positive	No class II DSA	Unacceptable	
3966	131	99%	Positive	A24(6416) A2(8230) B7(1252) B46(3681) Cw1(1091) Cw7(6598)	Positive	No class II DSA	Unacceptable	B*07:06 not covered in SAB panel
8001	131	100	Positive	A2(12404) B46(4803) Cw1(1349) Cw7(10713)	Positive	No class II DSA	Unacceptable	A*24:07, B*07:06 are not included on LSAB panel; DRB1*14:04,DQB1*05:03, DQA1*01:04, DQA1*05:06 are not included on LSAB panel
8029	131	45%	Positive	A24(3052) A203(4415)	Positive	No class II DSA	Unacceptable	
8050	131	99.83	Positive	A24(3381) A2(7099) B46(2964) Cw1(1051) Cw7(7966)	Positive	No class II DSA	Unacceptable	
8080	131	100	Positive	A24(11470) B7(1799) B46(5717) Cw7(11865)	Positive	No class II DSA	Unacceptable	A2 self-reactivity MFI 12923 not reported as DSA; No Class II DSA present, but Class I DSA present
8083	131	99.98	Positive	A203(11904) B46(5974) Cw7(11417)	Positive	No class II DSA	Unacceptable	Possible DSA to A*24:07 due to positive A*24:02 (MFI = 9962) and A*24:03 (MFI=9301). No bead for A*24:07 to confirm. Due to expression of Class I on B cells.
8103	131	30	Positive	A24(1936) A203(2442) A2(2789) B46(552)Cw7(1406)	Borderline	No class II DSA	Unacceptable	low MFI on HLA I antibodies
8111	131	99	Positive	A24(7600) A2(10100) B7(1200) B46(4300) Cw1(1100) Cw7(9400)	Positive	No class II DSA	Unacceptable	

Table 25. Individual Virtual crossmatch results for Serum #131 vs Donor# V3

Donor #V3 HLA genotype: A*03:01-A*69:01-B*35:01-B*55:01-C*01:02-C*04:01-DRB1*03:02-DRB1*13:02-DRB3*01:01-DRB3*03:01-DQA1*01:02-DQA1*04:01-DQB1*04:02-DQB1*06:04-DPA1*01:03-DPA1*02:02-DPB1*01:01-DPB1*03:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	131	100	Positive	B55(3034) A69(8220) B35(15038)	Positive	No class II DSA	Unacceptable	Positive due to Class I DSA
230	131	44	Positive	B55(4348) A69(11298) B35(22022)	Negative	No class II DSA	Unacceptable	
774	131	100	Positive	B55(2986) B35(15420)	Positive	DQ6(2932)	Unacceptable	
792	131	100	Positive	B55(2592) A69(6639) B35(12614) B55(2482) A69(5579) B35(13330)	Positive	No class II DSA	Unacceptable	
1426	131	100%	Positive	Cw1(1488)	Positive	No class II DSA	Unacceptable	
1461	131	47	Positive	A69(1752) B35(4853)	Positive	No class II DSA	Unacceptable	
2400	131	100%	Positive	B55(4112) A69(11251) B35(18186) Cw1(1549)	Positive	No class II DSA	Unacceptable	No Class II DSA. Positive due to Class I abs.
3224	131	100%	Positive	B55(3482) A69(9772) B35(16363) Cw1(1119)	Positive	No class II DSA	Unacceptable	
3753	131	99.98%	Positive	B55(2720) A69(8682) B35(15946)	Positive	No class II DSA	Unacceptable	
3966	131	99%	Positive	B55(2846) A69(6538) B35(12062) Cw1(1091)	Positive	DQ6(1750)	Unacceptable	
8001	131	100	Positive	B55(3059) A69(10719) A3(735) B35(19017) Cw1(1349)	Positive	No class II DSA	Unacceptable	DRB1*13:02 in not included on LSAB panel
8029	131	45%	Positive	A69(3201) B35(6289)	Positive	No class II DSA	Unacceptable	
8050	131	99.83	Positive	B55(1825) A69(5607) B35(13212) Cw1(1051)	Positive	No class II DSA	Unacceptable	
8080	131	100	Positive	B55(3775) A69(11731) B35(18369)	Positive	No class II DSA	Unacceptable	No Class II DSA present, but Class I DSA present
8083	131	99.98	Positive	B55(3593) A69(10478) B35(19362)	Positive	No class II DSA	Unacceptable	Due to expression of Class I on B cells
8103	131	30	Positive	A69(1858) B35(3562)	Borderline	No class II DSA	Unacceptable	Low MFI on class I
8111	131	99	Positive	B55(2800) A69(8100) B35(14500) Cw1(1100)	Positive	No class II DSA	Unacceptable	

Table 26. Individual Virtual crossmatch results for Serum #131 vs Donor# V4

Donor #V4 HLA genotype: A*23:01-A*25:01-B*14:02-B*58:01-C*07:18-C*08:02-DRB1*01:01-DRB1*13:03-DRB3*01:01-DQA1*01:01-DQA1*05:05-DQB1*03:01-DQB1*05:01-DPA1*01:03-DPA1*02:01-DPB1*104:01-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
54	131	100	Positive	A25(8626) A23(7878) B58(9206) Cw7(10236)	Positive	DR1(1788)	Unacceptable	
230	131	77	Positive	A25(12088) A23(11852) B58(11999) Cw7(12491)	Borderline	DR1(2756)	Unacceptable	
774	131	100	Positive	A25(7454) A23(7313) B58(9683)	Positive	DR1(2471)	Unacceptable	
792	131	100	Positive	A25(6288) A23(6405) B58(7669) Cw7(7343)	Positive	No Class II DSA	Unacceptable	
1426	131	100%	Positive	A25(5368) A23(5804) B58(7601) Cw7(6618)	Positive	DR1(1629)	Unacceptable	
1461	131	47	Positive	A25(1982) A23(1385) B58(2434) Cw7(1802)	Positive	DR1(656)	Unacceptable	
2400	131	100%	Positive	A25(9817) A23(9561) B58(11292) Cw7(10979)	Positive	DR1(2902)	Unacceptable	
3224	131	100%	Positive	A25(9323) A23(8732) B58(10394) Cw7(10490)	Positive	DR1(2307)	Unacceptable	
3753	131	99.98%	Positive	A25(8156) A23(6628) B58(9079)	Positive	DR1(1603)	Unacceptable	
3966	131	99%	Positive	A25(6512) A23(6308) B58(7234) Cw7(6598)	Positive	DR1(1995)	Unacceptable	C*07:18 not covered in SAB panel
8001	131	100	Positive	A25(9240) A23(9511) B65(657) B58(10796)	Positive	DR1(2723) DQ5(999) DQA1*01(1540)	Unacceptable	C*07:18, C*08:02 are not included on LSAB panel. C*08:02 is patient's antigen; DPB1*104:01 is not included on LSAB panel
8029	131	45%	Borderline	A25(3275) A23(2147) B58(3501)	Borderline	DR1(1542)	Unacceptable	
8050	131	99.83	Positive	A25(4860) A23(4950) B58(7916) Cw7(7986)	Positive	DR1(1326)	Unacceptable	
8080	131	100	Positive	A25(10129) A23(10901) B58(12129) Cw7(13948)	Positive	DR1(2438)	Unacceptable	
8083	131	99.98	Positive	A25(9966) A23(10272) B58(12224)	Positive	DR1(3471)	Unacceptable	Possible DSA to C*07:18 due to positive C*07:02 (MFI=11417). No bead for C*07:18 to confirm. Also due to expression of Class I on B cells
8103	131	30	Positive	A25(1392) A23(1176) B58(1617) Cw7(1406)	Positive	DR1(530)	Unacceptable	Low MFI on class II
8111	131	99	Positive	A25(8100) A23(7800) B58(8700) Cw7(9400)	Positive	DR1(1700)	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #132 vs Donor# V1

Donor #V1 HLA A*02:01-A*26:01-B*27:05-B*51:08-C*02:02-C*16:02-DRB1*13:01-DRB1*15:01-DRB3*01:01-DRB5*01:01-DQA1*01:02:01G-DQA1*01:03-DQB1*06:02-DQB1*06:03-DPA1*01:03-DPB1*04:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	132	94	Positive	B51(4500) Cw2(1086) Cw16(1702) B2705(2492)	Positive	DR52(14861)	Unacceptable	
230	132	44	Positive	A2(2281) B27(4892) B51(8227) Bw4(6998)	Positive	DR52(21390) DPw4(18761)	Unacceptable	
774	132	99	Positive	A2(2005) B27(3332) B51(7076)	Positive	DR53(15169)	Unacceptable	
792	132	98	Positive	B27(1601) B51(3301)	Positive	DR52(12996)	Unacceptable	
1426	132	100%	Positive	A2(1147) B27(3068) B51(5985) Cw2(1522) Cw16(2567)	Positive	DR52(15686)	Unacceptable	
1461	132	35	Positive	A2(518) B27(1009) B51(1427) Cw2(610)	Positive	no class II DSA	Unacceptable	
2400	132	98%	Positive	A2(1373) B51(4792) B2705(2688)	Positive	DR52(16038)	Unacceptable	
3224	132	99%	Positive	A2(1336) B51(5601) Cw2(1588) B2705(2989)	Positive	DR52(15880)	Unacceptable	
3753	132	98.33%	Positive	A2(1158) B27(2748) B51(5681) Bw4(4434)	Positive		Unacceptable	Additional allele-specific antibodies detected: DRB3*01:01(17201 MFI)
3966	132	97%	Positive	A2(1491) B27(2176) B51(4054) Cw2(1144)	Positive	DR52(12444) DPw4(8778)	Unacceptable	B*51:08 not covered in SAB panel
8001	132	99	Positive	A2(1696) B2705(3171)	Positive	DR52(18940)	Unacceptable	B*51:08, C*16:02 are not included on LSAB panel
8029	132	25%	Borderline	B27(1523) B51(1902)	Positive	DR52(12081) DPw4(9616)	Unacceptable	
8050	132	98.56	Positive	A2(1067) B51(5585) Bw4(5000) Cw2(1669) B2705(2336)	Positive	DR52(16972)	Unacceptable	DR52 DSA allele-specific (DRB3*01:01)
8080	132	98	Positive	A2(2010) B27(3247) B51(6176) Cw2(1917) Cw16(3498)	Positive	DR52(17042)	Unacceptable	
8083	132	98.27	Positive	A2(1276) B27(2515)	Positive	DR52(18697)	Unacceptable	Possible DSA to B*51:08 due to positive reaction to B*51:01 (MFI=5057) and B*51:02 (MFI=5203). No bead for B*51:08 to confirm. Also due to expression of Class I on B cells
8103	132	26	Positive	B27(635) B51(792) B2705(635)	Positive	DR52(2429) DPw4(3911) DP402(3911)	Unacceptable	
8111	132	86	Positive	A2(900) B27(1900) B51(3600) Cw2(1000)	Positive	DR52(9000)	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #132 vs Donor# V2

Donor #V2 HLA genotype: A*02:03-A*24:07-B*07:06-B*46:01-C*01:02-C*07:02-DRB1*12:01-DRB1*14:04-DRB3*01:01-DQA1*01:04-DQA1*05:06-DQB1*03:01-DQB1*05:03-DPA1*02:02-DPB1*05:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	132	94	Positive	A24(9428)	Positive	DR12(14830) DR52(14861)	Unacceptable	
230	132	44	Positive	A24(15475) A2(2281)	Positive	DR12(19656) DR52(21390)	Unacceptable	
774	132	99	Borderline	A203(1719)	Positive	DR12(15027) DR52(15169)	Unacceptable	
792	132	98	Positive	A24(7083)	Positive	DR12(10291) DR52(10670)	Unacceptable	
1426	132	100%	Positive	A24(8749)	Positive	DR12(16022) DR52(15686)	Unacceptable	
1461	132	35	Positive	A24(5018)	Positive	DQ7(1272) DR12(6621)	Unacceptable	
2400	132	98%	Positive	A24(11793) A2(1195)	Positive	DR12(15780) DR52(16038) DQ5(1004) DQA1*05(1136)	Unacceptable	
3224	132	99%	Positive	A24(12435) A2(1336)	Positive	DR12(15332) DR52(15880)	Unacceptable	
3753	132	98.33%	Positive	A24(9892) A2(1158)	Positive	DR12(15360)	Unacceptable	Additional allele-specific antibodies detected: DRB3*01:01(17201 MFI)
3966	132	97%	Positive	A24(8112) A2(1188)	Positive	DR12(10243) DR52(12444)	Unacceptable	A*24:07 not covered in SAB panel
8001	132	99	Positive	A2(1430)	Positive	DR12(18353) DR52(18940)	Unacceptable	A*24:07, B*07:06 are not included on LSAB panel;
8029	132	25%	Positive	A24(7337)	Positive	DR12(10042) DR52(12081)	Unacceptable	DRB1*14:04, DQB1*05:03, DQA1*01:04, DQA1*05:06 are not included on LSAB panel
8050	132	98.56	Positive	A24(6579) A2(1067)	Positive	DR12(15211) DR52(16972)	Unacceptable	DR52 DSA allele-specific (DRB3*01:01)
8080	132	98	Positive	A24(15506) A2(1750)	Positive	DR12(16974) DR52(34084)	Unacceptable	
8083	132	98.27	NT		Positive	DR12(18277) DR52(18697)	Unacceptable	Possible DSA to A*24:07 due to positive A*24:02 (MFI=12163) and A*24:03 (MFI=9884). No bead for A*24:07 to confirm. Also due to expression of Class I on B cells
8103	132	26	Positive	A24(2824)	Positive	DR12(1895) DR52(2429)	Unacceptable	
8111	132	86	Positive	A24(8000) A2(900)	Positive	DR12(8300) DR52(9000)	Unacceptable	

Table 29. Individual Virtual crossmatch results for Serum #132 vs Donor# V3

Donor #V3 HLA genotype: A*03:01-A*69:01-B*35:01-B*55:01-C*01:02-C*04:01-DRB1*03:02-DRB1*13:02-DRB3*01:01-DRB3*03:01-DQA1*01:02-DQA1*04:01-DQB1*04:02-DQB1*06:04-DPA1*01:03-DPA1*02:02-DPB1*01:01-DPB1*03:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	132	94	Negative	No Class I DSA	Positive	DR52(19609) DPw3(11142)	Unacceptable	Unacceptable due to Class II DSA
230	132	44	Borderline	B35(2510)	Positive	DR52(21390) DPw3(14703)	Acceptable	
774	132	99	Borderline	A69(1666) B35(1663)	Positive	DR52(19137) DPw3(10530)	Unacceptable	
792	132	98	Negative	No Class I DSA	Positive	DR52(12996) DPw3(6655)	Unacceptable	
1426	132	100%	Negative	No Class I DSA	Positive	DR52(19397) DPw3(11610)	Unacceptable	
1461	132	35	Negative	No Class I DSA	Positive	DPw3(4861)	Unacceptable	
2400	132	98%	Negative	A69(1236) B35(1090)	Positive	DR52(18272) DPw3(10865)	Unacceptable	Unacceptable due to Class II DSAs.
3224	132	99%	Borderline	A69(1149) B35(1111)	Positive	DR52(18667) DPw3(10386)	Unacceptable	Strong class II DSA
3753	132	98.33%	Negative	No Class I DSA	Positive	DPw3(10215)	Unacceptable	Additional allele-specific antibodies detected: DRB3*01:01(17201 MFI) and DRB3*03:01 (20895 MFI)
3966	132	97%	Borderline	A69(1019)	Positive	DR52(12444) DPw3(6684)	Unacceptable	
8001	132	99	Positive	Cw4(504) A69(1409) B35(1143)	Positive	DR52(21379) DPw3(11754)	Unacceptable	DRB1*13:02 is not included in LSAB panel
8029	132	25%	Negative	No Class I DSA	Positive	DR52(12081) DPw3(7377)	Unacceptable	Virtual B CELL Prediction POSITIVE
8050	132	98.56	Negative	No Class I DSA	Positive	DR52(18989) DPw3(10422)	Unacceptable	DR52 DSA allele-specific (DRB3*01:01 and DRB3*03:01)
8080	132	98	Negative	A69(1744)	Positive	DR52(38865) DPw3(11211)	Unacceptable	
8083	132	98.27	Negative	No Class I DSA	Positive	DR52(23940) DPw3(12036)	Unacceptable	
8103	132	26	Negative	No Class I DSA	Positive	DR52(2429) DPw3(3384)	Other-Borderline	High MFI on class II
8111	132	86	Negative	No Class I DSA	Positive	DR52(9000) DPw3(4500)	Unacceptable	

Table 30. Individual Virtual crossmatch results for Serum #132 vs Donor# V4

Donor #V4 HLA genotype: A*23:01-A*25:01-B*14:02-B*58:01-C*07:18-C*08:02-DRB1*01:01-DRB1*13:03-DRB3*01:01-DQA1*01:01-DQA1*05:05-DQB1*03:01-DQB1*05:01-DPA1*01:03-DPA1*02:01-DPB1*104:01-DPB1*17:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	132	94	Positive	A25(4152) A23(14692) B58(4361)	Positive	DR52(14861) DPw3(11142) DP17(10214)	Unacceptable	
230	132	44	Positive	A25(7817) A23(21914) B58(8380) Bw4(6998)	Positive	DR52(21390)	Unacceptable	
774	132	99	Positive	A25(5494) A23(20040) B58(7490)	Positive	DR52(15169) DP17(10141)	Unacceptable	
792	132	98	Positive	A25(2794) A23(12276) B58(3180)	Positive	DR52(12996) DP17(6170)	Unacceptable	
1426	132	100%	Positive	A25(4402) A23(17660) B58(5985)	Positive	DR52(15686) DQ7(1272) DPw3(11920) DP17(11080)	Unacceptable	
1461	132	35	Positive	A25(1402) A23(6316) B58(2319)	Positive	DPw3(4861) DP17(3583)	Unacceptable	
2400	132	98%	Positive	A25(4791) A23(18582) B58(5369)	Positive	DR52(16038) DPw3(10865) DP17(10647) DQA1*05(1268)	Unacceptable	
3224	132	99%	Positive	A25(4854) A23(19397) B58(5975)	Positive	DR52(15880) DPw3(10386) DP17(10094)	Unacceptable	
3753	132	98.33%	Positive	A25(5001) A23(17001) B58(5582) Bw4(4434)	Positive	DPw3(10215) DPw6(9631) DP17(10292) DP14(10176)	Unacceptable	Additional allele-specific antibodies detected: DRB3*01:01(17201 MFI)
3966	132	97%	Positive	A25(3455) A23(12948) B58(3971)	Positive	DR52(12444) DP17(6552)	Unacceptable	
8001	132	99	Positive	A25(5593) A23(20220) B58(6503)	Positive	DR52(18940) DP17(11171) DQA1*05(1007)	Unacceptable	C*07:18, C*08:02 are not included on LSAB panel; DPB1*104:01 in not included on LSAB panel
8029	132	25%	Positive	A25(2208) A23(8928) B58(3176)	Positive	DR52(12081) DP17(6899)	Unacceptable	
8050	132	98.56	Positive	A25(4072) A23(14523) B58(5795) Bw4(5000)	Positive	DR52(16972) DPw3(10422) DP17(10438)	Unacceptable	DR52 DSA allele-specific (DRB3*01:01) DPB1*104:01 DSA listed as DP3
8080	132	98	Positive	A25(5463) A23(19190) B58(7127)	Positive	DR52(17042) DPw3(10844) DP17(10542)	Unacceptable	
8083	132	98.27	Positive	A25(4611) A23(20607) B58(5503)	Positive	DR52(18697) DP17(11066)	Unacceptable	Also due to expression of Class I on B cells
8103	132	26	Positive	A25(827) A23(3896) B58(1155)	Positive	DR52(2429)	Unacceptable	
8111	132	86	Positive	A25(3200) A23(13200) B58(4000)	Positive	DR52(9000) DPw3(4500) DP17(4500)	Unacceptable	anti-DP reactivity explained by HVR C (DP17 and DP*104) reactivity

Table 31: Individual Cutoff values and Pretreatment - Exchange 22

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment	
230	A	4000	DRB1	4000	One Lambda	SAB ExPlex	None	
	B	4000	DRB3/4/5	4000				
	C	10000	DQA1	4000				
	Class I			DQB1				4000
				DPB1				10000
				Class II				
774	A	2000	DRB1	2000	One Lambda	SAB	DTT	
	B	2000	DRB3/4/5	2000				
	C	5000	DQA1	2000				
	Class I		2000	DQB1				2000
				DPB1				5000
				Class II				2000
792	A	1500	DRB1	1500	One Lambda	SAB	FBS/EDTA	
	B	1500	DRB3/4/5	1500				
	C	1500	DQA1	1500				
	Class I		1500	DQB1				1500
				DPB1				1500
				Class II				1500
1426	A	1000	DRB1	1000	One Lambda	SAB	DTBA	
	B	1000	DRB3/4/5	1000				
	C	1000	DQA1	1000				
	Class I		1000	DQB1				1000
				DPB1				1000
				Class II				1000
2400	A	2000	DRB1	2000	One Lambda	SAB	EDTA	
	B	2000	DRB3/4/5	2000				
	C	2000	DQA1	2000				
	Class I		2000	DQB1				2000
				DPB1				2000
				Class II				2000
3224	A		DRB1		One Lambda	SAB	EDTA	
	B		DRB3/4/5					
	C		DQA1					
	Class I		1000	DQB1				
				DPB1				
				Class II				1000
3753	A	1000	DRB1	1000	One Lambda	SAB	DTT	
	B	1000	DRB3/4/5	1000				
	C	2000	DQA1	1000				
	Class I		1000	DQB1				1000
				DPB1				2000
				Class II				1000
5214	A	2000	DRB1	2000	One Lambda	SAB	FCS + EDTA	
	B	2000	DRB3/4/5	2000				
	C	2000	DQA1	2000				
	Class I		2000	DQB1				2000
				DPB1				2000
				Class II				2000

Table 31: Individual Cutoff values and Pretreatment - Exchange 22

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Kit type	Sera pretreatment
8001	A		DRB1		One Lambda	SAB	EDTA
	B		DRB3/4/5				
	C		DQA1				
	Class I	1000	DQB1				
			DPB1				
			Class II	1000			
8029	A	500	DRB1	500	Lifecodes-Immucor	SAB	None
	B	500	DRB3/4/5	500			
	C	500	DQA1	500			
	Class I	17	DQB1	500			
			DPB1	500			
			Class II	17			
8050	A	1000	DRB1	1000	One Lambda	SAB	DTT
	B	1000	DRB3/4/5	1000			
	C	1000	DQA1	1000			
	Class I	1000	DQB1	1000			
			DPB1	1000			
			Class II	1000			
8083	A		DRB1		One Lambda	SAB	EDTA
	B		DRB3/4/5				
	C		DQA1				
	Class I	2000	DQB1				
			DPB1				
			Class II	2000			
8103	A	94	DRB1	0	Lifecodes-Immucor	SAB	Heat Inactivation
	B	96	DRB3/4/5	0			
	C	45	DQA1	35			
	Class I	15400	DQB1	35			
			DPB1	7			
			Class II	17867			