

Report of the 21st Single Antigen, Flow and Virtual Crossmatch Exchange

March 24, 2021

Cells	121-122
Serum	123-126

For Exchange 21, Serum 119 (patient 1) and virtual donor V4 from Exchange 20 (December 2020) were re-examined as serum 123 and cell 121. A comparison of virtual crossmatch (VXM) predictions (serum 119 vs. V4) against the physical flow crossmatch (FXM) (**serum 123 vs. cell 121**) are summarized in **Part 1** of this report. **Part 2** examines the Luminex single

antigen data for the 4 sera examined (**serum nos. 123 - 126**) in this study. **Part 3** summarizes the flow crossmatch results for 2 cells (**cell nos. 121 - 122**) against the 4 sera. Finally, in **Part 4**, the virtual crossmatch predictions for 4 potential donors (V1 - V4) against 2 sera (serum 125 and serum 126) are examined.

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 119 vs. donor V4 in Exchange 20. Of the 21 labs, 17 of the labs reported back physical T-cell FXM results and 16 labs reported physical B-cell FXM results for this patient-donor pair in Exchange 21. For

the T-cell FXM, 15 labs reported the physical FXM as positive in agreement with predictions. One lab reported it as negative and 1 lab reported borderline results (Table 1b). For the B-cell FXM, 14 labs reported the physical FXM as positive in agreement with predictions. One lab reported it as negative, while another reported it as borderline (Table 1b).

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

Exchange 020					Exchange 021				
Virtual Crossmatch - Serum 119 (Patient) vs. Donor V4					Physical Flow Crossmatch - Serum 123 vs. Cell 121				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V4	119	17	POS (17)	POS (17)	121	123	17	POS (15) NEG (1) Borderline (1)	POS (14) NEG (1) Borderline (1) NT (1)

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

		T-cell Virtual XM (Exchange 20)					B-cell Virtual XM (Exchange 20)		
		+	-	∅			+	-	∅
Physical T-cell FXM (Exchange 21)	+	15			Physical B-cell FXM (Exchange 21)	+	14		
	-	1				-	1		
	∅	1				∅	2		

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

n = number of labs

The reporting of DSA and DSA strength was consistent across the 2 studies (Table 1c). In Exchange 20, anti-A2 (6375) and -DR7 (5497) reactivity was reported against donor V4. In Exchange 21, anti-A2 and -DR7

reactivity was reported once again. MFI values for each DSA were 5782 and 5304, respectively, similar to what was reported in the previous study.

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

Cell #121 HLA Genotype: A*01:01-A*02:01-B*13:02-B*52:01-C*06:02-C*12:02-DRB1*07:01-DRB1*15:02:01G-DRB4*01:03-DRB5*01:02-DQA1*01:03-DQA1*02:01-DQB1*02:02-DQB1*06:01- DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*17:01

Exchange 020					Exchange 021				
Virtual Crossmatch - Serum 119 (Patient 1) vs. Donor V4					Physical Flow Crossmatch - Serum 123 vs. Cell 121				
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	A2 (7605)	Positive	DR7 (5690)	54	Positive	A2(6820)	Positive	DRB1*07:01(4535)
230	Positive	A2 (8882)	Positive	DR7 (5877)	230	Positive	A2(8336)	Positive	DR7(6891)
774	Positive	A2 (6809)	Positive	DR7 (3852)	774	Negative	A*02:01(5506)	Negative	DRB1*07:01(5710)
792	Positive	A2 (6028)	Positive	DR7 (5048)	792	Positive	A2(6027)	Positive	DR7(4932)
1426	Positive	A2 (4617)	Positive	DR7 (5191)	1426	Positive	A2(4068)	Positive	DR7(3607)
2400	Positive	A2 (6549)	Positive	DR7 (5056)	2400	Positive	A*02:01(3628)	Positive	DRB1*07:01(2686)
3224	Positive	A2 (9010)	Positive	DR7 (5899)	3224	Positive	A2 7940	Positive	DR7 5558
3753	Positive	A2 (6118)	Positive	DR7 (5594)	3753	Positive	A2(5837)	Positive	DR7(5201)
3966	Positive	A2 (7204)	Positive	DR7 (5621) DQA1*02 (4281)	3966	Positive		Positive	
4661	Positive	A2 (2361)	Positive	DR7 (3597)	4661	Positive	A*02:01(1623)	Positive	DRB1*07:01(1973)
8001	Positive	A2 (7634)	Positive	DR7 (5462) DPA1*02 (550)	8001	Positive	A*01:01(505) A*02:01(7742)	Positive	DRB1*07:01(5512)
8035	Positive	A2 (6905)	Positive	DR7 (8417)	8035	Positive	A*01:01(791), A*02:01(7615)	Positive	DR7(8441)
8050	Positive	A2 (5906)	Positive	DR7 (4685)	8050	Positive	A2(4574)	Positive	DR7(5407)
8083	Positive	A2 (8030)	Positive	DR7 (5507)	8083	Positive	A*02:01(9623)	Positive	DR*07:01(5935)
8096	Positive	A2 (3831)	Positive	DR7 (6042)	8096	Positive		NT	
8103	Positive	A2 (1639)	Positive	DR7 (1254) DQA1*02 (965)	8103	Borderline	A*02:01(1030)	Borderline	DRB1*07:01(1290)
8111	Positive	A2 (5000)	Positive	DR7 (6000)	8111	Positive	A2(4650)	Positive	DR7(4600)

Part 2

Class I and class II Luminex single antigen results for serum samples 123 - 126 are summarized in Tables 12 - 15 and individual results for each

participating laboratory are listed in Tables 16 – 22.

Antibody Identification

Serum 123 This sample was previously examined as serum 119 in Exchange 20. A comparison of results from Exchange 20 and Exchange 21 showed consistency in the reporting of antibodies and antibody strength across the 2 studies:

Exchange 20		Exchange 21		Exchange 20		Exchange 21	
Class I		Class I		Class II		Class II	
*** Serum 119 ***		*** Serum 123 ***		*** Serum 119 ***		*** Serum 123 ***	
Antigen	Median	Antigen	Median	Antigen	Median	Antigen	Median
A2	6375	A2	5782	DQ7	4811	DQ7	4293
A25	13547	A25	12590	DQ8	4422	DQ8	3892
A26	7855	A26	6981	DQ9	4559	DQ9	3895
A32	5962	A32	5360	DR7	5497	DR7	5304
A34	3416	A34	3130	DR9	2208	DR9	1990
A43	4751	A43	4237				
B57	18251	B57	17757				
B58	15165	B58	14942				

Anti-A2 (5782) and -DR7 (5304) reactivity was reported against cell 121 and cell 122 in this sample.

Serum 124: This sample was not graded for class I, as only 78% of labs reported it as class I negative. A few labs (n= 3) reported weak anti-B7 (1190) reactivity. By contrast, strong reactivity to DQ5 (23180), DQ6 (23726), DR15 (17746), DR16 (6064) and DR51 (12285) was reported in complete consensus.

Strong class II DSA (DQ6, DR15, and DR51) was reported against cell 121, with respective MFI = 23726, 17746, and 12285. Against cell 122, labs reported anti-DQ5 (23180), -DR16 (6064), and -DR51 (12285) reactivity.

Genotypes of cells provided by UCLA

Cell 121 (Hispanic) - A*01:01-A*02:01-B*13:02-B*52:01-C*06:02-C*12:02-DRB1*07:01-DRB1*15:02:01G-DRB4*01:03-DRB5*01:02-DQA1*01:03-DQA1*02:01-DQB1*02:02-DQB1*06:01- DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*17:01

Cell 122 (Caucasian/Hispanic) - A*02:01-A*03:02-B*27:05:02G-B*51:01-C*01:02:01G-C*15:02:01G-DRB1*07:01-DRB1*16:01-DRB4*01:01:01G-DRB5*02:02:01G-DQA1*01:02:01G-DQA1*02:01-DQB1*02:02-DQB1*05:02-DPB1*11:01-DPB1*15:01

Serum 125: Strong anti-B13 (10507), -B44 (18566), -B45 (20363), -B76 (17426), and -B82 (11694) reactivity was reported in this sample. Each were reported by 100% of labs. In addition, anti-A1 (4920), -B41 (8796), -B47 (6265), -B49 (9744), -B50 (9623), -B60 (8299), and -B61 (8567) reactivity was also reported by labs in complete consensus. Class II reactivity was detected in this sample, with labs reporting reactivity to DQ7 (6994), DQ8 (5833), DQ9 (5440), DR4 (5861), and DR53 (2680) by ≥ 90% consensus.

Anti-A1 (4920), -B13 (10507), -Cw6 (2987), and -DR53 (2680) reactivity was reported against cell 121. Against cell 122, weak anti-Cw15 (3002) and DR53 (2680) reactivity was reported.

Serum 126: Strong reactivity to a number of class I specificities was detected in this sample, including reactivity to A1 (20838), A36 (14291), B76 (11058), Cw10 (10321), and Cw9 (14976). Each were reported by 100% of labs. For class II, anti-DQ4 (7423), DQ5 (14845), DQ6 (13307), DR1 (DR103) (19548), DR10 (11890), and DR51 (12765) reactivity was reported by 100% of labs.

Strong anti-A1 (20838), -DQ6 (13307) and -DR51 (12765) reactivity, was reported against cell 121. In addition, reactivity to Cw12 (6114) and B13 (1644) was reported by some labs. Against cell 122, labs reported anti-Cw15 (2709), -DQ5 (14845), and -DR51 (12765) reactivity.

Conclusion:

Good agreement was achieved for serum samples 123, 125, and 126 in the detection of class I and class II antibodies. Peak DSA ranged from 17757 to 20838 for class I antibodies and 5304 to 23726 for class II antibodies. For serum 124, however, no consensus was achieved for the reporting of class I antibodies. The majority of labs (78%) reported the sample as negative for class I, while a few (n = 3) labs reported weak class I DSA were present.

Part 3

Flow cytometric crossmatch results for cell 121 and cell 122 against sera sample nos. 123 - 126 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 121. For cell 121, good agreement ($\geq 80\%$) was achieved for all 8 T/B FXM against serum samples 123 - 126. Among them, 7 crossmatches were reported as positive in the presence of class I and/or class II DSA, with MFI > 5000 . The remaining crossmatch was reported as negative in the absence of class I DSA.

Cell 122. For cell 122, 5 out of 8 T/B FXM achieved a consensus of $\geq 80\%$. Among them, 4 were reported as positive in the presence of class I and/or class II DSA, with MFI > 5000 . For the remaining 3 crossmatches, no consensus was achieved. In each case, weak DSA (MFI < 3000) at the C-locus were present leading to the variability observed in T/B-cell FXM outcome.

Table 2. Summary of Flow crossmatch results for Cell #121- #122 vs. Serum #123 - #126

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
121	123	21	POS(18) NEG(1) Borderline(1) NT(1)	POS(17) NEG(1) Borderline(1) NT(2)	122	123	21	POS(19) NT (2)	POS(18) NT(3)
121	124	21	NEG(19) Borderline(1) NT(1)	POS(19) NT(2)	122	124	21	NEG(17) POS(2) NT(2)	POS(18) NT(3)
121	125	21	POS(19) Borderline(1) NT(1)	POS(18) Borderline(1) NT(2)	122	125	21	NEG(15) POS(3) Borderline(1) NT(2)	NEG(14) POS(2) Borderline(2) NT(3)
121	126	21	POS(20) NT(1)	POS(19) NT(2)	122	126	21	NEG(15) POS(3) Borderline(1) NT(2)	POS(18) NT(3)

indicates consensus $< 80\%$

Conclusion:

In this study, good agreement ($\geq 80\%$) was achieved among labs with respect to positive T/B FXM outcome in the presence of DSA of > 5000 MFI.

However, as DSA strength fell (MFI < 3000), we observed greater variability among labs in the reporting of FXM outcome.

Part 4

Virtual crossmatch predictions for donor V1 - V4 against sera (patient) samples 125 and 126 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, 6 out of 8 VXM achieved $\geq 80\%$ agreement among labs. Class I DSA of > 7000 MFI were present in the case of the positive predictions. For the T-cell VXM with $< 80\%$ agreement, DSA at the C-locus were reported with MFI < 6500 .

For virtual **B-cell predictions** of the expected B-cell FXM, all 8 B-cell VXM achieved $\geq 80\%$ agreement among labs. In each case, class II and/or class I DSA were present with MFI > 5500 .

Table 3. Summary of Virtual Crossmatch Predictions (Serum #125 - #126 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	125	21	POS(21)	POS(21)	Unacceptable(21)	V2	125	21	POS(13) NEG(6) Borderline(2)	POS(21)	Unacceptable(21)
V1	126	21	POS(21)	POS(21)	Unacceptable(20) Other(1)	V2	126	21	POS(19) NEG(1) Borderline(1)	POS(21)	Unacceptable(21)
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
V3	125	21	POS(21)	POS(21)	Unacceptable(21)	V4	125	21	NEG(20) Borderline(1)	POS(20) Borderline(1)	Unacceptable(20) Acceptable(1)
V3	126	21	POS(21)	POS(21)	Unacceptable(21)	V4	126	21	POS(11) NEG(5) Borderline(5)	POS(18) Borderline(3)	Unacceptable(19) Acceptable(1) Other(1)

indicates consensus $< 80\%$

DSA Identification

Patient 1 (Serum 125)

Patient's fictional case history: This individual is a 36 year old female being evaluated for her first transplant. Patient has had 1 prior pregnancy. The HLA type of the child is A*33:03-A*11:01-B*58:01-B*07:05-C*03:02-C*15:05-DRB1*03:01-DRB1*10:01-DRB3*02:02-DQA1*05:01-DQA1*01:05-DQB1*02:01-DQB1*05:01-DPA1*01:03-DPB1*04:01. The patient's HLA type is as follows: A*33:03-B*58:01-C*03:02-DRB1*03:01-DRB3*02:02-DQA1*05:01-DQB1*02:01-DPA1*01:03-DPB1*02:01-DPB1*04:01

Against **donor V1**, anti-B61 (8567), -B44 (18566), -DR4 (5861), -DR53 (2680), and -DQ8 (5833) reactivity was reported by labs. The presence of multiple DSA resulted in all 21 labs to predict the physical T/B-cell FXM to be positive. In turn, predicted renal transplant risk was assessed as unacceptable in complete agreement.

For serum 125 against **donor V2**, the reporting of class I DSA (A24, Cw15, B62) was mixed among labs, as MFI values for each were < 3100. By contrast, good agreement was achieved in the reporting of class II DSA, with labs reporting anti-DQ7 (6694) and -DQ8 (5833) reactivity. Additional anti-DR53 (2680) reactivity was reported as well by some labs. Only 62% (13/21) of labs predict the T-cell FXM to be positive due to the weak DSA present, while B-cell predictions were reported as positive by 100%. For renal transplant risk, all 21 labs predict the risk as unacceptable.

Against **donor V3**, strong anti-B44 (18566) reactivity was detected. Additional weak anti-B62 (1568) reactivity was also reported by some labs. No class II DSA were detected against the donor. For virtual predictions, all 21 labs predict the physical T/B-cell FXM to be positive due to class I reactivity. Predicted renal transplant risk was assessed as unacceptable in complete agreement.

Anti-DR4 (5861), -DR53 (2680), and -DQ8 (5833) reactivity was detected against **donor V4**. Agreement for the reporting of class I DSA was < 90%, as 17 of 21 labs reported the absence of class I DSA. The remaining 4 labs reported weak (MFI < 1500) class I DSA were present. Consequently, all but 1 lab predict the physical T-cell FXM to be negative, while 20 labs predict the physical B-cell FXM to be positive. For renal transplant risk, 20 labs predict the risk to be unacceptable.

Virtual Donors – HLA genotype

Donor 1 (V1): A*29:02-A*68:03-B*40:02-B*44:03-C*03:04-C*16:01-DRB1*04:07-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQA1*03:01-DQB1*02:02-DQB1*03:02:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Donor 2 (V2): A*24:02-A*26:03-B*51:01-B*15:01-C*14:02-C*15:02-DRB1*09:01:02G-DRB1*14:03-DRB3*01:01-DRB4*01:03-DQA1*03:02-DQA1*05:07-DQB1*03:01:01G-DQB1*03:03-DPA1*01:03:01G-DPA1*02:02-DPB1*02:01:02G-DPB1*05:01:01G

Donor 3 (V3): 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

Donor 4 (V4): A*02:06-A*68:03-B*35:12-B*48:01-C*04:01-C*08:01-DRB1*04:07-DRB1*08:02-DRB4*01:03-DQA1*03:01-DQA1*04:01-DQB1*03:02:01G-DQB1*04:02-DPA1*01:03-DPB1*04:02

Patient 2 (Serum 126)

Patient's fictional case history: Individual is a 25 year-old male being evaluated for his first transplant. The patient's HLA type is as follows: A*02:01-A*25:01-B*08:01-B*35:02-C*04:01-C*07:01-DRB1*03:01-DRB1*11:01-DRB3*01:01-DRB3*02:02-DQA1*05:01-DQA1*05:05-DQB1*02:01-DQB1*03:01-DPA1*01:03-DPB1*02:01-DPB1*06:01

Anti-Cw10 (10321) reactivity was reported in serum 126 against **donor V1**. In addition, some labs reported reactivity to A29 (4725) and Cw16 (2835) against the donor. The reporting of class II DSA was mixed among labs, with 13 labs noting no class II DSA were present and 7 labs reporting weak anti-DR4 (2994) reactivity. For virtual predictions, all 21 labs predict the physical T/B-cell FXM to be positive due to class I reactivity. Consequently, predicted renal transplant risk was assessed to be unacceptable in complete agreement.

For sample 114 against **donor V2**, anti-B62 (7507) and -DR9 (7956) reactivity was reported by > 80% of labs. Additional reactivity to Cw14 (2249), Cw15 (2709), and DR14 (1709) was reported by some labs. Good agreement was also achieved for virtual T/B-cell predictions, as 19 out of 21 labs predict the physical T-cell FXM to be positive and all 21 labs predict the physical B-cell FXM to be positive. Renal transplant risk was assessed as unacceptable in complete agreement.

Strong anti-Cw9 (14976), -B62 (7507), and -DQ6 (13307) reactivity was reported against **donor V3** in this sample. Additional anti-Cw14 (2249) and -DQA1*01 (14751) reactivity was also reported by some labs. The presence of strong DSA resulted in all 21 labs to predict the physical T/B-cell FXM to be positive. In turn, renal transplant risk was predicted to be unacceptable in complete agreement.

Against **donor V4**, anti-DQ4 (7423) reactivity was reported by labs. In addition, 18 out of 21 labs reported weak anti-Cw8 (6260) reactivity. The remaining 3 labs indicated no class I DSA were present. As a result, T-cell predictions were mixed among labs, with 11 labs predicting the physical T-cell FXM to be positive, 5 labs predicting it to be negative, and 5 labs predicting borderline results. Better agreement was achieved for B-cell predictions, as 18 labs predict the physical B-cell FXM to be positive and 3 labs predict borderline results. For predicted renal transplant risk, 19 labs assessed the risk as unacceptable.

Conclusion

Good agreement ($\geq 80\%$) was achieved for 14 out of 16 virtual T/B-cell crossmatch predictions. In each case, DSA of > 5500 MFI were present. For the remaining 2 VXM in which agreement fell below 80%, variability was observed in both predictions and the reporting of DSA. For serum 125 vs. donor V2, weak DSA (MFI < 3100) were present, resulting in only 13

labs to predict the physical T-cell FXM to be positive. For serum 126 vs. donor V4, the variability in VXM predictions was the result of DSA at the C-locus (Cw8). As the strength of the DSA was < 6300 MFI, only 11 labs predict the physical T-cell FXM to be positive, while the other half predict it to be borderline or negative.

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Flow Cytometric Crossmatch

Cell #121 HLA Genotype: A*01:01-A*02:01-B*13:02-B*52:01-C*06:02-C*12:02-DRB1*07:01-DRB1*15:02:01G-DRB4*01:03-DRB5*01:02-DQA1*01:03-DQA1*02:01-DQB1*02:02-DQB1*06:01- DPA1*01:03-DPA1*02:01-DPB1*04:01-DPB1*17:01

Table 4. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #123

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	123	61	117			Positive	A2(6820)	91	208			Positive	DRB1*07:01(4535)	93	177	YES
230	123	6.7	3.3			Positive	A2(8336)	4.7	10			Positive	DR7(6891)	5.7	2.7	YES
615	123	351	443			Positive	A*02:01(6182)	383	575			Positive	DRB1*07:01(5940)	288	311	YES
774	123	≥50	8			Negative	A*02:01(5506)	≥ 120	32			Negative	DRB1*07:01(5710)	245	346	NO
792	123	52	99			Positive	A2(6027)	106	238			Positive	DR7(4932)	245	278	YES
1160	123	60	155			Positive	A2(3616)	70	272			Positive	DR7(2662)	202	248	YES
1426	123	50	144.5			Positive	A2(4068)	92	251			Positive	DR7(3607)	285.5	306	YES
2400	123	18	76			Positive	A*02:01(3628)	18	72			Positive	DRB1*07:01(2686)	58	184	YES
3224	123	70	106			Positive	A2 7940	140	203			Positive	DR7 5558	167	166	YES
3753	123	50	97			Positive	A2(5837)	100	222			Positive	DR7(5201)	226	235	YES
3966	123	20	116			Positive		50	192			Positive		209	317	NO
4661	123	10	58			Positive	A*02:01(1623)	10	185			Positive	DRB1*07:01(1973)	197	225	YES
5214	123	19	45		14252	Positive	A2(M8900)	28	70		77099	Positive	DR7(6100)	262	280	YES
8001	123	50	195			Positive	A*01:01(505) A*02:01(7742)	100	230			Positive	DRB1*07:01(5512)	216	349	YES
8035	123	>48	163			Positive	A*01:01(791), A*02:01(7615)	>90	279			Positive	DR7(8441)	166	188	YES
8050	123	50	181		4188	Positive	A2(4574)	120	277		23101	Positive	DR7(5407)	63	130	YES
8062	123					NT						NT				YES
8083	123	70	98			Positive	A*02:01(9623)	140	199			Positive	DR*07:01(5935)	191	261	YES
8096	123	5	8.75			Positive						NT		11.24		NO
8103	123	182	153	1.2		Borderline	A*02:01(1030)	649	493	1.7		Borderline	DRB1*07:01(1290)	152	382	NO
8111	123	34	78			Positive	A2(4650)	35	233			Positive	DR7(4600)	326	305	YES

Table 5. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #124

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	124	61	-24			Negative	No Class I DSA	91	339			Positive	DQB1*06:01(22006); DRB1*15:02(15678) DRB5*01:02(7617)	93	177	YES
230	124	6.7	0			Negative		4.7	32			Positive	DR15, DR51, DQ6 (26757)	5.7	2.7	YES
615	124	351	280			Negative	No Class I DSA	383	680			Positive	DRB1*07:01(1489) DRB1*15:02(14082) DRB5*01:02(10551) DQA1*01:03 DQB1*06:01(17662) DPB1*04:01	288	311	YES
774	124	≥50	-8			Negative	No Class I DSA	≥ 120	174			Positive	DQB1*06:01(24470); DRB1*15:02(17021)	245	346	NO
792	124	52	4			Negative	No Class I DSA	106	365			Positive	DQ6(23835), DR15(16141), DR51(11981), DP4(3601)	245	278	YES
1160	124	60	<0			Negative	No Class I DSA	70	390			Positive	DQ6(18176); DR15(10694); DR7(739); DP4(1351); DRB5*01:01(6401)	202	248	YES
1426	124	50	-4.5			Negative	No Class I DSA	92	379			Positive	DR51(9985), DR15(15095), DQ6(22805), DP4(1934)	285.5	306	YES
2400	124	18	3			Negative	No Class I DSA. Surrogate XM result used..	18	135			Positive	DRB1*07:01(1572), DRB1*15:02(19498), DRB5*01(13780), DQB1*06:01(25239), DPB1*04:01(4618)	58	184	YES
3224	124	70				Negative	No Class I DSA	140	356			Positive	DR15(16897); DR51(12589); DQ6(23616); DQA1*01:03(23616); DP4(3677)	167	166	YES
3753	124	50	2			Negative	No Class I DSA	100	384			Positive	DR15(17380), DR51(11942), DQ6(23309), DP401(4076)	226	235	YES
3966	124	20	21			Borderline		50	315			Positive		209	317	NO

Table 5. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #124

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
4661	124	10	0			Negative	No Class I DSA	10	282			Positive	DRB1*15:02(8365), DRB5*01:01(5077), DQB1*06:01(6156), DPB1*04:01(1467)	197	225	YES
5214	124	19	0		0	Negative	No Class I DSA	28	96		205104	Positive	DR15(17800), DR7(1434), DR51(12100), DQ6(23100)	262	280	YES
8001	124	50	7			Negative	No Class I DSA	100	294			Positive	DRB1*07:01(629) DRB1*15:02(16651) DQB1*06:01(24245) DPB1*04:01(3628)	216	349	YES
8035	124	>48	0			Negative	No Class I DSA	>90	251			Positive	DR7(1244) DR*15:02(21449) DRB5*01:02(15225) DQ*06:01(29543) DQA*01:03(29356) DP*04:01(5996) DPA*01(3510)	166	188	YES
8050	124	50	1		635	Negative	No Class I DSA	120	347		48098	Positive	DR15(17786) DR51(11047) DQ6(25803) DP4(2829)	63	130	YES
8062	124					NT						NT				YES
8083	124	70	-26			Negative	No Class I DSA	140	222			Positive	DR*15:02(19993) DQB1*06:01(27587) DP*04:01(4785)	191	261	YES
8096	124	5	0.59			Negative	No Class I DSA					NT		11.24		NO
8103	124	182	158	1.2		Negative	No Class I DSA	649	1338	1.7		Positive	DRB1*15:02(6134); DR51(6218), DQB*05:02(8098), DQA1*01:03(7669)	152	382	NO
8111	124	34	0			Negative	No Class I DSA	35	311			Positive	DQ6(26, 800) DR15(19, 600) DR51(12, 700) DR7(1300) DP4(2800)	326	305	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #125

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	125	61	252			Positive	B*13:02(10422); A*01:01(5630); C*06:02(2732)	91	227			Positive	DRB4*01:03(2303)	93	177	YES
230	125	6.7	11.9			Positive	A1,B13 (7733)	4.7	12			Positive		5.7	2.7	YES
615	125	351	569			Positive	A*01:01(5980); B*13:02(10101); C*06:02(2275)	383	599			Positive	DRB4*01:03(3217)	288	311	YES
774	125	≥50	94			Positive	B*13:02(10744); A*01:01(4059)	≥ 120	81			Positive	DRB4*01:03(3005)	245	346	NO
792	125	52	203			Positive	B13(10269), A1(5543), Cw6(2217)	106	241			Positive	DR53(2680)	245	278	YES
1160	125	60	291			Positive	A1(3710); B13(6623); Cw6(1445)	70	264			Positive	DR53(1474)	202	248	YES
1426	125	50	275.5			Positive	A1(4149), B13(8194), C6(2444)	92	265			Positive	DR53(2206)	285.5	306	YES
2400	125	18	157			Positive	A*01:01(5592), B*13:02(9940)	18	85			Positive	DRB4*01:03(2002)	58	184	YES
3224	125	70	232			Positive	A1(7154); B13(12423); Cw6(3591)	140	204			Positive	DR53(2972)	167	166	YES
3753	125	50	226			Positive	A1(3962), B13(9484), Cw6(2970)	100	226			Positive	DR53(2189)	226	235	YES
3966	125	20	262			Positive		50	188			Positive		209	317	NO
4661	125	10	183			Positive	A*01:01(1054), B*13:02(1645)	10	229			Positive	DRB4*01:01(1169)	197	225	YES
5214	125	19	84		68237	Positive	A1(7800), B13(12200), C6(4200)	28	77		100341	Positive	DR4(6400), DR53(3200), DQ7(7800), DQ8(6600), DQ9(5900)	262	280	YES
8001	125	50	357			Positive	A*01:01(7114) B*13:02(13630) B*52:01(686) C*06:02(3004)	100	283			Positive	DRB4*01:03(2932)	216	349	YES

Table 6. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #125

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
8035	125	>48	118			Positive	A*01:01(6063), B*13:02(14984), B*52:01(1136), C*01:02(1138), C*06:02(5439)	>90	114			Positive	DRB4*01:03(5108)	166	188	YES
8050	125	50	307		15678	Positive	A1(2954) B13(10883) Cw6(3563)	120	290		26471	Positive	DR53(2531)	63	130	YES
8062	125					NT						NT				YES
8083	125	70	197			Positive	A*01:01(7014) B*13:02(12716) C*06:02(2911)	140	201			Positive	DRB4*01:03(3512)	191	261	YES
8096	125	5	44.49			Positive						NT		11.24		NO
8103	125	182	401	1.2		Borderline	A*01:01(835), B*13:02(1154)	649	799	1.7		Borderline		152	382	NO
8111	125	34	200			Positive	B13(9500) A1(5000) Cw6(1800)	35	251			Positive	DR53(2300)	326	305	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #126

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	126	61	309			Positive	A*01:01(19320); C*12:02(3215); B*13:02(1091)	91	300			Positive	DQB1*06:01(10772); DRB5*01:02(10645)	93	177	YES
230	126	6.7	15.8			Positive	A1(25674)	4.7	24.7			Positive	DR51,DQ6(14076)	5.7	2.7	YES
615	126	351	611			PositiveStrong	A*01:01(18401); B*13:02(1042); C*12:02(5583)	383	676			Positive	DRB5*01:02(14332); DQA1*01:03 DQB1*06:01(11724)	288	311	YES
774	126	≥50	122			Positive	A*01:01(18881)	≥ 120	132.5			Positive	DQB1*06:01(11488)	245	346	NO
792	126	52	213			Positive	A1(18315), Cw12(4899)	106	319			Positive	DQ6(13009), DR51(12388)	245	278	YES
1160	126	60	335			Positive	A1(15896)	70	351			Positive	DQ6(7712); DRB5*01:01(11376)	202	248	YES
1426	126	50	321.5			Positive	A1(20548), B13(1416), C12(6122)	92	357			Positive	DQ6(12026) DR51(13678)	285.5	306	YES
2400	126	18	167			Positive	A*01:01(24764), C*12(6799)	18	109			Positive	DRB5*01(17129), DQB1*06:01(14663)	58	184	YES
3224	126	70	302			Positive	A1(21410); B13(1027); Cw12(6981)	140	313			Positive	DR51(13999); DQ6(15764); DQA1*01:03(15370)	167	166	YES
3753	126	50	268			Positive	A1(21954), Cw12(4425)	100	320			Positive	DR51(11966), DQ6(11035)	226	235	YES
3966	126	20	271			Positive		50	261			Positive		209	317	NO
4661	126	10	128			Positive	A*01:01(6316)	10	243			Positive	DRB5*01:01(5205), DQB1*06:01(3120)	197	225	YES
5214	126	19	90		86258	Positive	A1(22360), B13:02(1000), C12(6860)	28	92		177863	Positive	DR51(13620), DQ6(13300)	262	280	YES
8001	126	50	355			Positive	A*01:01(23472) B*13:02(876)	100	326			Positive	DQB1*06:01(13351)	216	349	YES
8035	126	>48	239			Positive	A*01:01(20986), B*13:02(1140), C*12:02(4814)	>90	281			Positive	DRB5*01:02(13484), DQB1*06:01(14993), DQA1*01:03(16417)	166	188	YES
8050	126	50	333		20586	Positive	A1(16569) Cw12(4106)	120	333		41536	Positive	DR51(10923) DQ6(9711)	63	130	YES
8062	126					NT						NT				YES
8083	126	70	220			Positive	A*01:01(24301)	140	225			Positive225	DQB1*06:01(13596)	191	261	YES

Table 7. Individual Flow crossmatch results and DSA reported for Cell #121 vs. Serum #126

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
8096	126	5	85.23			Positive						NT		11.24		NO
8103	126	182	503	1.2		Positive	A*01:01(5899), C*12:02(502)	649	1065	1.7		Positive	DQB1*06:01(1156), DRB5*01:01(3749), DQA1*01:03(1156)	152	382	NO
8111	126	34	185			Positive	A1(20, 000)	35	310			Positive	DQ6(9000) DR51(11, 000)	326	305	YES

Cell #122 HLA Genotype: A*02:01-A*03:02-B*27:05:02G-B*51:01-C*01:02:01G-C*15:02:01G-DRB1*07:01-DRB1*16:01-DRB4*01:01:01G-DRB5*02:02:01G-DQA1*01:02:01G-DQA1*02:01-DQB1*02:02-DQB1*05:02-DPB1*11:01-DPB1*15:01

Table 8. Individual Flow crossmatch results and DSA reported for Cell #122 vs. Serum #123

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	123	61	152			Positive	A*02:01(6820)	91	199			Positive	DRB1*07:01(4535)	86	152	YES
230	123	4.2	7.2			Positive	A2(8339)	4.2	8			Positive	DR7(6891)	3.2	2.2	YES
615	123	298	451			Positive	A*02:01(6182)	398	606			Positive	DRB1*07:01(5940)	235	326	YES
774	123	≥ 50	84			Positive	A*02:01(5506)	≥ 120	80			Positive	DRB1*07:01(5710)	261	382	NO
792	123	52	155			Positive	A2(6027)	106	220			Positive	DR7(4932)	247	272	YES
1160	123	60	241			Positive	A2(3616)	70	272			Positive	DR7(2662)	176	247	YES
1426	123	50	188			Positive	A2(4068)	92	245			Positive	DR7(3607)	283	326	YES
2400	123	18	65			Positive	A*02:01(3628)	18	56			Positive	DRB1*07:01(2686)	69	259	YES
3224	123	70	177			Positive	A2(7940)	140	214			Positive	DR7 5558	167	166	YES
3753	123	50	164			Positive	A2(5837)	100	244			Positive	DR7(5201)	210	234	YES
3966	123	20	136			Positive		50	137			Positive		177	353	NO
4661	123	10	111			Positive	A*02:01(1623)	10	179			Positive	DRB1*07:01(1973)	194	235	YES
5214	123	19	59		21537	Positive	A2(8900)	28	64		56571	Positive	DR7(6100)	258	278	YES
8001	123	50	255			Positive	A*02:01(7742)	100	191			Positive	DRB1*07:01(5512)	185	332	YES
8035	123	>48	150			Positive	A*02:01(7615),	>90	219			Positive	DR7(8441)	157	186	YES
8050	123	50	237		6809	Positive	A2(4574)	120	184		9391	Positive	DR7(5407)	55	138	YES
8062	123					NT						NT				YES
8083	123	70	176			Positive	A*02:01(9623),	140	147			Positive	DR*07:01(5935)	191	261	YES
8096	123	5	35.48			Positive						NT	13.22			NO
8103	123	124		1.2		NT	A*02:01(1030)	749		1.7		NT	DRB1*07:01(1290)	104	441	NO
8111	123	34	87			Positive	A2(4650)	35	160			Positive	DR7(4600)	338	336	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #122 vs. Serum #124

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	124	61	-13			Negative	No Class I DSA	91	307			Positive	DQB1*05:02(MFI 19522); DRB5*02:02(11654); DRB1*16:01(4649)	86	152	YES
230	124	4.2	0			Negative	No Class I DSA	4.2	21			Positive	DR16,DR51,DQ5(26859)	3.2	2.2	YES
615	124	298	263			Negative	No Class I DSA	398	676			Positive	DRB1*07:01(1489); DRB1*16:01(6338); DRB5*02:02(11620); DQA1*01:02 DQB1*05:02(16220); DPB1*15:01	235	326	YES
774	124	≥ 50	-5			Negative	No Class I DSA	≥ 120	183			Positive	DQB1*05:02(21631); DRB5*02:02(13328); DRB1*16:01(6352)	261	382	NO
792	124	52	33			Negative	No Class I DSA	106	335			Positive	DQ5(21830), DR51(11981), DR16(6047)	247	272	YES
1160	124	60	31			Negative	No Class I DSA	70	357			Positive	DQ5(15608); DR51(7733); DR16(3419); DR7(739)	176	247	YES
1426	124	50	19			Negative	No Class I DSA	92	329			Positive	DQ5(22702), DR16(3432), DR51(9985)	283	326	YES
2400	124	18	9			Negative	No Class I DSA	18	94			Positive	DRB1*07:01(1572), *16:01(7909), DRB5*02(16237), DQB1*05:02(23832)	69	259	YES
3224	124	70				Negative	No Class I DSA	140	307			Positive	DR16(6080); DR51(12589); DQ5(22455); DQA1*01:02(23351)	167	166	YES
3753	124	50	31			Negative	No Class I DSA	100	334			Positive	DR16(6450), DR51(11942), DQ5(23307)	210	234	YES
3966	124	20	72			Positive		50	263			Positive		177	353	NO
4661	124	10	0			Negative	No class I DSA	10	239			Positive	DRB1*16:01(2900), DRB5*02:02(6295), DQB1*05:02(7606)	194	235	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #122 vs. Serum #124

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
5214	124	19	5		629	Negative	No Class I DSA	28	89		146387	Positive	DR16(5900), DR7(1400), DR51(12100), DQ5(23000)	258	278	YES
8001	124	50	51			Positive	No Class I DSA	100	275			Positive	DRB1*07:01(629) DRB1*16:01(5438) DQB1*05:02(22420)	185	332	YES
8035	124	>48	4			Negative	No Class I DSA	>90	179			Positive	DR7(1244), DRB1*16:01(9767), DRB5*02:02(16172), DQB1*05:02(26299), DQA1*01:02(26536), DP15(1498)	157	186	YES
8050	124	50	11		604	Negative	No Class I DSA	120	154		6809	Positive	DR51(11047) DQ5(24698) DR16(5616)	55	138	YES
8062	124					NT						NT				YES
8083	124	70	-9			Negative	No Class I DSA	140	237			Positive	DRB1*16:01(8151), DQB1*05:02(23819), RB5*02:02(16348)	191	261	YES
8096	124	5	2.89			Negative						NT		13.22		NO
8103	124	124		1.2		NT	No Class I DSA	749		1.7		NT	DQB1*05:02(8098), DQA1*01:02(1165)	104	441	NO
8111	124	34	0			Negative	No Class I DSA	35	253			Positive	DQ5(26,000) DR51(13000) DR16(5800) DR7(1300)	338	336	YES

Table 10. Individual Flow crossmatch results and DSA reported for Cell #122 vs. Serum #125

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	125	61	-18			Negative	C*15:02(3010)	91	23			Negative	DRB4*01:01(1730)	86	152	YES
230	125	4.2	0			Negative	No Class I DSA	4.2	0			Negative		3.2	2.2	YES
615	125	298	270			Negative	C*15:02(2256)	398	385			Borderline	DRB4*01:01(2735)	235	326	YES
774	125	≥ 50	-8			Negative	No Class I DSA	≥ 120	-79			Negative	DRB4*01:01(2647)	261	382	NO
792	125	52	31			Negative	Cw15(2258)	106	54			Negative	DR53(2680)	247	272	YES
1160	125	60	51			Negative	Cw15(1535)	70	49			Negative	DR53(1313)	176	247	YES
1426	125	50	24			Negative	Cw15(2752)	92	36			Negative	DR53(2206)	283	326	YES
2400	125	18	10			Negative	No class I DSA	18	8			Negative	DRB4*01:01(2143)	69	259	YES
3224	125	70	25			Borderline	Cw15(3276)	140				Borderline	DR53(2972)	167	166	YES
3753	125	50	25			Negative	Cw15(2864)	100	29			Negative	DR53(2189)	210	234	YES
3966	125	20	75			Positive		50	60			Positive		177	353	NO
4661	125	10	1			Negative	No class I DSA	10	12			Positive	DRB4*01:01(1169)	194	235	YES
5214	125	19	9		1182	Negative	No Class I DSA	28	9		2195	Negative	No Class I DSA	258	278	YES
8001	125	50	70			Positive	C*15:02(2819)	100	69			Negative	DRB4*01:01(2539)	185	332	YES
8035	125	>48	33			Negative	C*01:02(1138), C*15:02(5626)	>90	56			Negative	DRB4*01:01(4369)	157	186	YES
8050	125	50	31		749	Negative	Cw15(4070)	120	14		1519	Negative	DR53(2531)	55	138	YES
8062	125					NT						NT				YES
8083	125	70	108			Negative	C*15:02(3002)	140	61			Negative	DRB4*01:01(3019)	191	261	YES
8096	125	5	20.76			Positive						NT		13.22		NO
8103	125	124				NT		749				NT		104	441	NO
8111	125	34	0			Negative	C*15(1500)	35	0			Negative	DR53(2300)	338	336	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #122 vs. Serum #126

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	126	61	-33			Negative	C*01:02(4554); C*15:02(2186)	91	220			Positive	DQB1*05:02(9474); DRB5*02:02(11597)	86	152	YES
230	126	4.2	0			Negative		4.2	9.1			Positive	DR51,DQ5 (18369)	3.2	2.2	YES
615	126	298	240			Negative	C*01:02(4919); C*15:02(2362)	398	610			Positive	DRB5*02:02(14056); DQA1*01:02 DQB1*05:02(11165)	235	326	YES
774	126	≥ 50	-3			Negative	No Class I DSA	≥ 120	121			Positive	DRB5*02:02(10576); DQB1*05:02(9423)	261	382	NO
792	126	52	44			Negative	Cw1(4419), Cw15(1929)	106	269			Positive	DR51(12388), DQ5(14285)	247	272	YES
1160	126	60	34			Negative	No Class I DSA	70	281			Positive	DR51(10892); DQ5(6656)	176	247	YES
1426	126	50	12			Negative	Cw1(4759), Cw15(2546)	92	246			Positive	DQ5(14271), DR51(13678)	283	326	YES
2400	126	18	12			Negative	C*01:02(5813),1 5:02(2682)	18	60			Positive	DRB5*02:02(16414),D QB1*05:02(13037)	69	259	YES
3224	126	70	7.5			Borderline	Cw1 6401; Cw15 2709	140	255			Positive	DR51(13999); DQ5(17021); DQA1*01:02(15764)	167	166	YES
3753	126	50	29			Negative	Cw1(3980), Cw15(2134)	100	255			Positive	DR51(11966), DQ5(12570)	210	234	YES
3966	126	20	55			Positive		50	189			Positive		177	353	NO
4661	126	10	0			Negative	No class I DSA	10	192			Positive	DRB5*02:02(4838), DQB1*05:02(3392)	194	235	YES
5214	126	19	8		1031	Negative	C1(5600), C15(3250)	28	69		67638	Positive	DQ5(14900), DR51(13620)	258	278	YES
8001	126	50	52			Positive		100	253			Positive	DRB5*02:02(12865) DQB1*05:02(11448)	185	332	YES
8035	126	>48	8			Negative	C*01:02(4824),C *15:02(3159)	>90	117			Positive	DRB5*02:02(13660),D QB1*05:02(12699),DQ A1*01:02(12844)	157	186	YES
8050	126	50	8		585	Negative	Cw1(3309) Cw15(1853)	120	156		6957	Positive	DR51(10923) DQ5(11728)	55	138	YES
8062	126					NT						NT				YES
8083	126	70	128			Positive	C*01:02(5282) C*15:02(2544)	140	173			Positive	DRB5*01:01(12303) DQB1*05:02(10810)	191	261	YES
8096	126	5	0.24			Negative						NT		13.22		NO
8103	126	124		1.2		NT		749		1.7		NT	DQA1*01:02(2240), DQB1*05:02(858), DRB5*02:02(3455)	104	441	NO
8111	126	34	0			Negative	Cw1(3500) C*15(1450)	35	196			Positive	DQ5(10600) DR51(11000)	338	336	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #123

Class I							
*** Serum 123 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	18	100%	5782	5714	2305	1749	9853
A25	18	100%	12590	11459	4335	3673	16600
A26	18	100%	6981	6778	2649	1780	10661
A32	18	100%	5360	4842	2294	656	8179
A43	18	100%	4237	4243	1742	965	7387
B57	18	100%	17757	15939	4849	5907	22337
B58	18	100%	14942	13351	4260	4439	18254
A34	17	94%	3130	3049	1309	693	5588
A33	16	88%	2408	2509	1174	550	4597
A11	15	83%	2610	2851	1291	792	6208
A29	15	83%	2332	2350	901	737	4213
A68	15	83%	2011	2125	1080	552	4401
B63	15	83%	2220	2161	885	565	3584
A31	14	77%	2288	2205	934	555	3907
A66	14	77%	6532	6616	2516	2161	11184
A74	13	72%	1880	1827	707	669	3056
A69	12	66%	1878	1899	853	440	3584
A6601	5	27%	3832	5713	3354	2161	10394
A1101	4	22%	2206	2250	1309	792	3797
A1102	4	22%	2857	2953	2019	778	5321
A6602	4	22%	2217	2162	1263	680	3537
A203	3	16%	1838	3521	3037	941	7785
A1	1	5%	791	791	-	791	791
A30	1	5%	749	749	-	749	749
A36	1	5%	767	767	-	767	767
B62	1	5%	1032	1032	-	1032	1032
B75	1	5%	1196	1196	-	1196	1196
B76	1	5%	1270	1270	-	1270	1270
B77	1	5%	1113	1113	-	1113	1113

Class II							
*** Serum 123 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ7	18	100%	4293	4215	2068	644	7847
DQ8	18	100%	3892	3903	1861	792	7756
DQ9	18	100%	3895	3672	1796	648	7105
DR7	18	100%	5304	4770	2032	1290	8441
DR9	15	83%	1990	1914	724	635	3490
DR52	11	61%	1694	1819	613	711	2866
DR12	10	55%	1323	1271	458	533	2030
DQ3	2	11%	1067	1066	275	792	1341
DQA1*03	2	11%	5292	5291	2424	2868	7715
DQA1*05	2	11%	5603	5603	2306	3297	7909
DQA1*06	2	11%	6034	6034	2407	3627	8441

Blue = DSA against cell #121 only

Gold = DSA against cell #122 only

Green = DSA against cell #121 and #122

Table 13. Summary of Single Antigen results for Serum #124

Class I							
*** Serum 124 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
NEG	14	78%					
B7	3	17%	1190	1246	155	1091	1458
A29	2	11%	865	864	92	773	956
B81	2	11%	721	721	203	518	924
A23	1	6%	827	827	-	827	827
A24	1	6%	782	782	-	782	782
A2403	1	6%	640	640	-	640	640
B35	1	6%	958	958	-	958	958

Blue = DSA against cell #121 only
Gold = DSA against cell #122 only
Green = DSA against cell #121 and #122

Class II							
*** Serum 124 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ5	18	100%	23180	21765	6469	7606	31434
DQ6	18	100%	23726	22674	5983	9193	33415
DR15	18	100%	17746	16543	4510	7337	23110
DR16	18	100%	6064	5925	2182	2181	9670
DR51	18	100%	12285	11902	3203	6218	16348
DR1	17	94%	2145	2170	753	833	3461
DR9	17	94%	2460	2471	1001	578	4189
DR103	16	88%	2656	2509	855	869	3680
DPw2	15	83%	3547	3453	1459	791	6214
DP18	14	77%	2142	2095	847	724	3469
DP28	14	77%	2755	2736	1069	717	4508
DP23	13	72%	3223	3347	1042	1196	5388
DPw4	9	50%	2829	3080	1424	778	5165

Table 14. Summary of Single Antigen results for Serum #125

Class I							
*** Serum 125 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A1	18	100%	4920	4790	2428	835	8300
B13	18	100%	10507	9409	4349	1154	16500
B41	18	100%	8796	8155	3559	1281	13300
B44	18	100%	18566	16407	5569	5288	25700
B45	18	100%	20363	18263	6414	4390	28000
B47	18	100%	6265	5968	2615	1018	10300
B49	18	100%	9744	9200	3992	1707	15800
B50	18	100%	9623	9134	3936	1680	15700
B60	18	100%	8299	7704	3405	1221	13000
B61	18	100%	8567	7693	3475	1071	13500
B76	18	100%	17426	15331	5454	3933	23700
B82	17	94%	11694	11021	3710	4672	17900
A23	16	88%	2474	2638	1325	506	4718
Cw6	12	66%	2987	3195	1434	670	5800
A24	11	61%	2200	2012	996	550	3593
Cw15	11	61%	3002	3527	1389	1255	6200
Cw18	11	61%	2550	2808	990	931	4700
Cw5	11	61%	2759	3091	1181	1012	5300
Cw17	7	38%	1871	2381	812	1580	3829
Cw2	7	38%	2350	2686	799	1806	3900
B62	6	33%	1568	1616	389	1110	2200
B56	4	22%	1348	1378	247	1119	1700
B72	4	22%	1620	1622	288	1330	1919
B35	2	11%	987	986	14	973	1000
B52	2	11%	1068	1068	68	1000	1136
B53	2	11%	1002	1001	2	1000	1003
B63	2	11%	1127	1127	27	1100	1154
B75	2	11%	1073	1072	28	1045	1100
Cw4	2	11%	1242	1241	142	1100	1383
B15	1	5%	3933	3933	-	3933	3933
B40	1	5%	1221	1221	-	1221	1221
B4005	1	5%	14324	14324	-	14324	14324
B48	1	5%	3023	3023	-	3023	3023
B54	1	5%	733	733	-	733	733
B55	1	5%	800	800	-	800	800
B71	1	5%	2450	2450	-	2450	2450
B8201	1	5%	13276	13276	-	13276	13276

Class II							
*** Serum 125 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ7	18	100%	6994	7316	3562	1089	14600
DQ8	18	100%	5833	6143	3075	1106	13400
DQ9	18	100%	5440	5843	3053	719	13000
DR4	18	100%	5861	5842	2123	2115	10800
DR53	17	94%	2680	2743	1182	847	5500
DQA1*03	6	33%	1774	2737	1960	1094	6554
DQA1*05	3	16%	3900	4684	3374	1000	9153
DQA1*06	2	11%	9087	9087	4821	4266	13908
DR9	2	11%	1066	1065	235	831	1300
DQ3	1	5%	1106	1106	-	1106	1106

Blue = DSA against cell #121 only

Gold = DSA against cell #122 only

Green = DSA against cell #121 and #122

Table 15. Summary of Single Antigen results for Serum #126

Class I							
*** Serum 126 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A1	18	100%	20838	19109	5953	5899	27100
A36	18	100%	14291	13548	4736	3512	19900
B57	18	100%	6725	6152	3281	729	11265
B62	18	100%	7507	7117	3204	1505	11200
B63	18	100%	6529	5952	3117	962	10928
B75	18	100%	6895	6828	3210	1156	11900
B76	18	100%	11058	10172	4035	2347	16600
B77	18	100%	7212	6455	3074	953	10392
Cw10	18	100%	10321	10189	4055	1749	17900
Cw9	18	100%	14976	13757	5256	2524	22000
A29	17	94%	4725	4372	1910	514	8300
B46	17	94%	6663	6231	2711	629	9863
A80	16	88%	6640	6170	2026	1283	10400
Cw8	13	72%	6260	6021	1813	1317	9400
Cw1	12	66%	5012	4851	1479	1340	7300
Cw12	12	66%	6114	5658	2004	502	9000
Cw15	11	61%	2709	2795	770	1853	4800
Cw16	11	61%	2835	2793	751	1533	4400
Cw14	10	55%	2249	2376	624	1113	3400
Cw5	6	33%	1645	1759	570	1117	2900
A26	5	27%	1656	1716	268	1405	2200
A43	4	22%	1634	1595	187	1313	1800
B13	3	16%	1644	1457	305	1027	1700
Cw2	2	11%	1392	1392	208	1184	1600
A68	1	5%	1403	1403	-	1403	1403
B15	1	5%	2463	2463	-	2463	2463
Cw17	1	5%	964	964	-	964	964
Cw3	1	5%	2524	2524	-	2524	2524

Class II							
*** Serum 126 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ4	18	100%	7423	6694	3138	886	14200
DQ5	18	100%	14845	13557	5756	1502	24800
DQ6	18	100%	13307	12214	5048	2240	23800
DR1	18	100%	21015	19498	5452	7723	27600
DR10	18	100%	11890	10434	3850	2604	15500
DR51	18	100%	12765	12102	3833	3709	18200
DR9	18	100%	7956	6952	2696	1559	11000
DR103	17	94%	18081	16739	4133	5791	21800
DR4	14	77%	2994	2699	1086	647	4800
DR14	8	44%	1709	1781	457	1100	2656
DQA1*01	3	16%	14751	10658	5953	2240	14983
DQA1*05	3	16%	1921	1704	366	1189	2003
DQA1*03	2	11%	10033	10033	464	9569	10497

Blue = DSA against cell #121 only

Gold = DSA against cell #122 only

Green = DSA against cell #121 and #122

Table 16a. Individual laboratory results for Serum #123 - class I by One Lambda Single Antigen

**** Serum 123 ****																								
Ctr	A2	A25	A26	A32	A43	B57	B58	A34	A33	A11	A29	A68	B63	A31	A66	A74	A69	A6601	A1101	A1102	A6602	Other	Manufacturer	
230	8339	16294	10205	7066	6397	19755	16435	4067		3900					8000								One Lambda	
774	5727	12384	7085	5308	4055	17286	14644	2914	2435	2610	2332		2468		7596								One Lambda	
792	6027	11096	6627	4854	4500	15551	12586	3332	2804	3645	2451	2714	1871	2339	7224	1858	1924						One Lambda	
1160	3659	7025	3872	2528	2721	10739	8924	1824	1541	1945	1294	1354	898	1293	4335	962	1110						One Lambda	
1426	4492	9645	5523	3538	3507	15494	13132	2436	1929	2351	1789	1768	2150	1760	4019								One Lambda	
2400	3659	7467	5113	2497	3127	12198	10222			2357					4631								One Lambda	
3224	7940	14220	8526	6446	5825	18227	15239	4066	3721		3143	3305	2218	2980		2354	2440	9080	3286	4582	3285	A203	One Lambda	
3753	5837	13747	7844	5663	4418	18564	15696	3130	2381	2620	2301	2011	2280	2237	5848	1880	1832						One Lambda	
5214	8843	15369	9149	6815	6410	19853	17740	4445	4597		3051	3276	2898	3180		2383	2736	10394	3797	5321	3537		One Lambda	
8001	7742	14532	9106	6262	5981	19753	16121	4475	3602	4440	3186	3439	2220	3132	9955	2408	2705						One Lambda	
8035	7450	16283	9705	7812	5449	20319	17695	3892	3017	2890	2880	2211	3584	2908	7086	2557	2170					B62,B75,A1,A30 >	One Lambda, Immucor	
8050	4574	12796	6876	5412	3516	19303	16069	2258	1895	1705	1834	1134	2337	1597	4527	1289	1044						One Lambda	
8062	7350	16600	8883	7072	5096	22337	18254	3912	3056	3540	2878	2405	2991	2524	10084	2042	1730						One Lambda	
8083	9853	15988	10661	8179	7387	19951	17664	5588	4538	6208	4213	4401	3506	3907	11184	3056	3584						One Lambda	
8096	4062	10648	5391	4428	3268	15882	12524	2289	2069	2144	2241	1310	1746	1606	5977	1457	1083						One Lambda	
Avg	6370	12940	7638	5592	4777	17681	14863	3473	2891	3104	2584	2444	2397	2455	6959	2022	2033	9737	3542	4952	3411			
Std Dev.S	2003	3169	2050	1770	1423	3182	2835	1060	990	1239	756	1010	727	794	2367	614	801	929	361	523	178			
MFI																								
%CV	31%	24%	27%	32%	30%	18%	19%	31%	34%	40%	29%	41%	30%	32%	34%	30%	39%	10%	10%	11%	5%			

Blue = DSA against cell #121 only
 Gold = DSA against cell #122 only
 Green = DSA against cell #121 and #122

Table 16b. Individual laboratory results for Serum #123 - class I by Lifecodes-Immucor Single Antigen

**** Serum 123 ****																								
Ctr	A2	A25	A26	A32	A43	B57	B58	A34	A33	A11	A29	A68	B63	A31	A66	A74	A69	A6601	A1101	A1102	A6602	Other	Manufacturer	
4661	2553	3854	2382	1232	1653	5907	4439	1073	859		737	861	565	555		669	440	3098	1126	1132	1148		Lifecodes	
8029	3013	4649	3292	1398	2109	9619	8190	1452	1158	1622	933	1137	695	864		846		3832				A203	Lifecodes	
8103	1749	3673	1780	656	965	6178	4759	693	550	792		552			2161			2161	792	778	680	A203	Lifecodes	
Avg	2438	4059	2485	1095	1576	7235	5796	1073	856	1207	835	850	630	710	-	758	-	3030	959	955	914			
Std Dev.S	640	519	761	389	576	2069	2079	380	304	587	139	293	92	218	-	125	-	838	236	250	331			
MFI																								
%CV	26%	13%	31%	36%	37%	29%	36%	35%	36%	49%	17%	34%	15%	31%	-	17%	-	28%	25%	26%	36%			

Table 17a. Individual laboratory results for Serum #124 - class I by One Lambda Single Antigen

		**** Serum 124 ****								
Ctr		B7	A29	B81	A23	A24	A2403	B35	Other	Manufacturer
230	NEG									One Lambda
774	NEG									One Lambda
792	NEG									One Lambda
1160	NEG									One Lambda
1426	NEG									One Lambda
2400	NEG									One Lambda
3224	NEG									One Lambda
3753	NEG									One Lambda
5214	NEG									One Lambda
8001	NEG									One Lambda
8035		1458	773	924				958		One Lambda, Immucor
8050	NEG									One Lambda
8062		1190								One Lambda
8083	NEG									One Lambda
8096		1091	956	518						One Lambda
Avg	-	1246	865	721	-	-	-	-		
Std										
Dev.S	-	190	129	287	-	-	-	-		
MFI										
%CV	-	15%	15%	40%	-	-	-	-		

Blue = DSA against cell #121 only

Gold = DSA against cell #122 only

Green = DSA against cell #121 and #122

Table 17b. Individual laboratory results for Serum #124 - class I by Lifecodes-Immucor Single Antigen

		**** Serum 124 ****								
Ctr		B7	A29	B81	A23	A24	A2403	B35	Other	Manufacturer
4661					827	782	640			Lifecodes
8029	NEG									Lifecodes
8103	NEG									Lifecodes
Avg	-	-	-	-	-	-	-	-		
Std										
Dev.S	-	-	-	-	-	-	-	-		
MFI										
%CV	-	-	-	-	-	-	-	-		

Table 18a. Individual laboratory results for Serum #125 - class I by One Lambda Single Antigen

**** Serum 125 ****																									
Ctr	A1	B13	B41	B44	B45	B47	B49	B50	B60	B61	B76	B82	A23	Cw6	A24	Cw15	Cw18	Cw5	Cw17	Cw2	B62	B56	B72	Other	Manufacturer
230	7733	12443	11252	21678	23610	8024	12253	12264	10612	8844	19976	13982	4123												One Lambda
774	4059	10744	8752	19022	20092	6074	9865	9590	8270	8289	17320	11932													One Lambda
792	5543	10269	8839	16044	18145	6412	9622	9656	8327	8977	14821	10708	3127	2217	2347	2258	1954	1994							One Lambda
1160	3710	6623	5417	13710	15355	3708	6186	6124	5140	5549	12388	8772	2142												One Lambda
1426	4297	8344	7279	14990	18629	5324	8577	8584	7128	6959	15782	10611	2211	2716	1206	2922	2401	2474	1580	1806	1234				One Lambda
2400	5621	9464	8345	16143	18320	6118	8978	9390	7499	6889	14701	10156	2257												One Lambda
3224	7154	12423	10538	19703	20633	7769	11996	11170	9936	10853	17531		4230	3591	3299	3276	2837	3106	1849	2350	1591	1158	1330	B8201	One Lambda
3753	3962	9484	8332	18109	21228	5853	9399	9278	7790	7481	18159	11694	1456	2970		2864	2415	2759							One Lambda
5214	7798	12024	10723	19640	22209	7781	12299	12052	10084	9604	20314	14589	4718	4214	3593	4506	3391	3869	2300	2755					One Lambda
8001	7114	13630	11683	21305	22575	8794	12786	12846	10699	11656	18410	13705	3602	3004	2689	2819	2486	2562	1843	1888	1545	1119	1339		One Lambda
8035	6063	14145	12255	19989	23860	9039	13363	13392	11962	11195	20261	14845	2690	5439	1186	5626	4251	4886	3829	3829	2017	1537	1919	Cw4,Cw403, B48,B52 >	One Lambda, Immucor
8050	2954	10883	9710	19300	23350	6791	11281	11021	9174	8875	18671	13286	1190	3563		4070	2977	3435	1871	2280	1110				One Lambda
8062	8300	16500	13300	25700	28000	10300	15800	15700	13000	13500	23700	17900	4200	5800	2200	6200	4700	5300	3400	3900	2200	1700	1900	Cw4,B52,B53, B75 >	One Lambda
8083	7014	12716	10531	20582	22193	7671	11686	11872	9845	10757	18457	13143	3781	2911	2937	3002	2550	2610							One Lambda
8096	1299	3947	3701	9231	11906	2658	4438	4001	3559	3661	9429	5286		1251		1255	931	1012							One Lambda
Avg	5508	10909	9377	18343	20674	6821	10569	10463	8868	8873	17328	12186	3056	3425	2432	3527	2808	3092	2382	2687	1616	1379	1622		
Std Dev.S	2058	3120	2567	3897	3871	2006	2876	2907	2471	2545	3510	3057	1147	1331	889	1457	1038	1239	877	864	426	285	332		
MFI																									
%CV	37%	29%	27%	21%	19%	29%	27%	28%	28%	29%	20%	25%	38%	39%	37%	41%	37%	40%	37%	32%	26%	21%	20%		

Blue = DSA against cell #121 only
 Gold = DSA against cell #122 only
 Green = DSA against cell #121 and #122

Table 18b. Individual laboratory results for Serum #125 - class I by Lifecodes-Immucor Single Antigen

**** Serum 125 ****																									
Ctr	A1	B13	B41	B44	B45	B47	B49	B50	B60	B61	B76	B82	A23	Cw6	A24	Cw15	Cw18	Cw5	Cw17	Cw2	B62	B56	B72	Other	Manufacturer
4661	1054	1645	1909	5821	5929	1505	1716	2254	1637	1540	5349	4672	808		950										Lifecodes
8029	1712	2925	2957	9076	8313	2594	3649	3555	2804	2776	6758	7393	1177	670	1175										Lifecodes
8103	835	1154	1281	5288	4390	1018	1707	1680	1221	1071	3933	4693	506		550									B40,B15	Lifecodes
Avg	1200	1908	2049	6728	6211	1706	2357	2496	1887	1796	5347	5586	830	-	892	-	-	-	-	-	-	-	-	-	
Std Dev.S	456	914	847	2051	1977	807	1119	961	821	881	1413	1565	336	-	317	-	-	-	-	-	-	-	-	-	
MFI																									
%CV	38%	48%	41%	30%	32%	47%	47%	38%	43%	49%	26%	28%	40%	-	36%	-	-	-	-	-	-	-	-	-	

Table 19a. Individual laboratory results for Serum #126 - class I by One Lambda Single Antigen

**** Serum 126 ****																								
Ctr	A1	A36	B57	B62	B63	B75	B76	B77	Cw10	Cw9	A29	B46	A80	Cw8	Cw1	Cw12	Cw15	Cw16	Cw14	Cw5	A26	A43	Other	Manufacturer
230	25674	18264	9668	10536	8891	10987	13250	9312	14479	19055	5890	8560	6996											One Lambda
774	18881	11798	2197	3498	2038	4151	7383	3052	10369	13576	3735	4146	5414											One Lambda
792	18315	13883	6617	7335	6524	7667	10102	6877	10227	12979	4353	6663	5737	5337	4419	4899	1929	2240	1909					One Lambda
1160	15896	10449	5366	5414	5138	5788	8043	5253	7648	9757	2220	5308	3129											One Lambda
1426	20689	15761	8462	8781	8423	7365	12256	8208	10272	14277	4725	8145	6856	6764	5200	6406	2874	3089	3005	1744	1568	1721	B13,A68	One Lambda
2400	24829	18967	10129	10849	10097	9316	15061	10392	12712	17723	6147	9863	8105	7486	5990	6957	2819	3673	3044					One Lambda
3224	21410	16630	8932	9258	8360	10173	11961	8724	12652	15674	5447	7869	6424	6552	6401	6981	2709	2843	2352	1350	1405	1313	B13	One Lambda
3753	21954	14698	6832	7678	6533	6425	11463	7547	10114	15711	3888	5776	5471	5106	3980	4425	2134	2030						One Lambda
5214	22362	17603	11265	11137	10928	9051	14512	10267	13074	18153	4935	9136	6992	7438	5586	6865	3250	3061	2519					One Lambda
8001	23472	17784	8726	9766	8533	9704	12864	8821	12990	16349	5944	8043	7048							1117	1754	1547		One Lambda
8035	20986	13195	2885	4836	3061	4607	9062	4526	11225	16909	5277	4885	7741	6006	4824	5942	3159	2667	2146	1900	1656		Cw2,Cw17	One Lambda, Immucor
8050	16569	9104	1466	2792	1522	2463	6626	2487	8744	14164	2465	3019	4340	4510	3309	4106	1853	1533	1113					One Lambda
8062	27100	19900	8100	11200	7300	11900	16600	10100	17900	22000	8300	9400	10400	9400	7300	9000	4800	4400	3400	2900	2200	1800	B13,Cw2	One Lambda
8083	24301	17856	9438	10195	9105	10626	13367	9195	13175	16660	5815	8265	7124	6569	5282	6286	2544	2835	2141					One Lambda
8096	18324	11726	3976	6648	4052	5328	10653	5435	9729	14033	3371	4770	5672	6260	4588	5534	2674	2362	2139	1546				One Lambda
Avg	21384	15175	6937	7995	6700	7703	11547	7346	11687	15801	4834	6923	6497	6493	5171	6127	2795	2794	2377	1760	1717	1595		
Std Dev.S	3339	3348	3090	2819	2937	2831	2906	2616	2558	2904	1571	2130	1694	1338	1132	1385	808	787	657	624	299	216		
MFI																								
%CV	16%	22%	45%	35%	44%	37%	25%	36%	22%	18%	33%	31%	26%	21%	22%	23%	29%	28%	28%	35%	17%	14%		

Blue = DSA against cell #121 only
 Gold = DSA against cell #122 only
 Green = DSA against cell #121 and #122

Table 19b. Individual laboratory results for Serum #126 - class I by Lifecodes-Immucor Single Antigen

**** Serum 126 ****																								
Ctr	A1	A36	B57	B62	B63	B75	B76	B77	Cw10	Cw9	A29	B46	A80	Cw8	Cw1	Cw12	Cw15	Cw16	Cw14	Cw5	A26	A43	Other	Manufacturer
4661	6316	5069	729	1505	962	1156	2347	953	2418	3109														Lifecodes
8029	10992	7673	3796	4376	3685	4060	5088	3341	3935	4988	1313	1454	1283	1317	1340									Lifecodes
8103	5899	3512	2164	2319	1989	2138	2463	1717	1749	2524	514	629		5531		502							B15,Cw3	Lifecodes
Avg	7736	5418	2230	2733	2212	2451	3299	2004	2701	3540	914	1042	-	3424	-	-	-	-	-	-	-	-	-	
Std Dev.S	2828	2102	1535	1480	1375	1477	1550	1220	1120	1287	565	583	-	2980	-	-	-	-	-	-	-	-	-	
MFI																								
%CV	37%	39%	69%	54%	62%	60%	47%	61%	41%	36%	62%	56%	-	87%	-	-	-	-	-	-	-	-	-	

Table 20a. Individual laboratory results for Serum #123 - class II by One Lambda Single Antigen

**** Serum 123 ****									
Ctr	DQ7	DQ8	DQ9	DR7	DR9	DR52	DR12	Other	Manufacturer
230	6315	4092	4685	6891					One Lambda
774	5743	5336	3861	5710	2343	2021			One Lambda
792	5160	4868	4691	4932	1908	1554			One Lambda
1160	3009	2603	2352	2662	1058		533		One Lambda
1426	3400	3073	2978	4050	1990	1672	1399		One Lambda
2400	2628	2670	2299	2781					One Lambda
3224	6043	5499	5324	5558	2134		1423		One Lambda
3753	4191	3725	4057	5201	1967	1762	1149		One Lambda
5214	4394	4058	3929	6108	2001				One Lambda
8001	5845	5705	5342	5512	2000	1694	1438		One Lambda
8035	6518	6100	5844	8441	3052	2735	1901	DQA1*03,DQA1*05,DQA1*06	One Lambda, Immucor
8050	3711	3462	3369	5407	1488	1566	1246		One Lambda
8062	7847	7756	7105	8091	3490	2866	2030		One Lambda
8083	5929	5699	5486	5935	2306	2326			One Lambda
8096	2681	2405	2327	3600	1307	1109	960	DQA1*03,DQA1*05,DQA1*06	One Lambda
Avg	4894	4470	4243	5392	2080	1931	1342		
Std									
Dev.S	1591	1542	1433	1676	653	557	454		
MFI									
%CV	33%	34%	34%	31%	31%	29%	34%		

Blue = DSA against cell #115 only
 Gold = DSA against cell #116 only
 Green = DSA against cell #121 and #122

Table 20b. Individual laboratory results for Serum #123 - class II by Lifecodes-Immucor Single Antigen

**** Serum 123 ****									
Ctr	DQ7	DQ8	DQ9	DR7	DR9	DR52	DR12	Other	Manufacturer
4661	1060	1341	1025	1973	1042	711	640	DQ3	Lifecodes
8029	757	1078	791	1724	635				Lifecodes
8103	644	792	648	1290				DQ3	Lifecodes
Avg	820	1070	821	1662	839	-	-		
Std									
Dev.S	215	275	190	346	288	-	-		
MFI									
%CV	26%	26%	23%	21%	34%	-	-		

Table 21a. Individual laboratory results for Serum #124 - class II by One Lambda Single Antigen

**** Serum 124 ****																		
Ctr	DQ5	DQ6	DR15	DR16	DR51	DR1	DR9	DR103	DPw2	DP18	DP28	DP23	DPw4	DP401	DP402	DQA1*01	Other	Manufacturer
230	26859	26678	19396	7789	14483													One Lambda
774	24243	25324	18457	6352	13328	2376	2877	2811										One Lambda
792	21830	23835	16141	6047	11981	2288	2704	2618	3532	2256	2851	3223	3601					One Lambda
1160	18774	19404	11786	3437	7733	1145	1080	1319	1419	960	1161	1196	1351				DR7	One Lambda
1426	22971	23084	15354	3685	10266	1821	2386	2265	2534	1242	1830	2202	2185					One Lambda
2400	24396	24631	20422	8005	15080	3337	3367	3638	4891	2721	3540	4288	4287					One Lambda
3224	22455	23616	16897	6080	12589	2295	2787	2774	3712	2270	2958	3114		3677	2857	23616		One Lambda
3753	23307	23309	17380	6450	11942	2118	2357	2904	3760		2658	3628		4076	3046			One Lambda
5214	23036	23020	17706	5867	11972	2329	2460	2694	3547	2027	2349	2920		3344	2662			One Lambda
8001	24271	24285	18238	5609	12600	2145	2821	2376	3602	2269	3021	3272		3628	2834			One Lambda
8035	27080	27643	21582	9670	16032	3318	4189	3535	6214	3469	4508	5388		5996	4927	27825	DR7,DR10,DR11,DR13 >	One Lambda, Immucor
8050	24698	25803	17786	5616	11047	1568	1747	1546	3216	1637	2196	2905	2829					One Lambda
8062	31434	33415	23110	8673	16254	2955	3917	3396	5279	3301	4260	4425	5165				DR7,DP15	One Lambda
8083	27714	28073	20795	8559	16348	3461	3774	3680	4917	3279	4031	4311	4785					One Lambda
8096	23053	23352	18603	7337	13011	2104	2328	2536	2991	1898	2236	2639	2740			24808	DPA1*01,DPA1*04	One Lambda
Avg	24408	25031	18244	6612	12978	2376	2771	2721	3816	2277	2892	3347	3368	4144	3265	25416		
Std																		
Dev.S	2961	3153	2740	1755	2393	680	842	715	1255	803	984	1084	1325	1068	939	2169		
MFI																		
%CV	12%	13%	15%	27%	18%	29%	30%	26%	33%	35%	34%	32%	39%	26%	29%	9%		

Blue = DSA against cell #115 only
 Gold = DSA against cell #116 only
 Green = DSA against cell #121 and #122

Table 21. Individual laboratory results for Serum #124 - class II by Lifecodes-Immucor Single Antigen

**** Serum 124 ****																		
Ctr	DQ5	DQ6	DR15	DR16	DR51	DR1	DR9	DR103	DPw2	DP18	DP28	DP23	DPw4	DP401	DP402	DQA1*01	Other	Manufacturer
4661	7606	9193	8565	2900	6295	1587	1707		1398	1281	717			1467	1423			Lifecodes
8029	9472	12419	8219	2410	7073	1222	932	1192	791	724			778					Lifecodes
8103	8571	11065	7337	2181	6218	833	578	869								11065		Lifecodes
Avg	8550	10892	8040	2497	6529	1214	1072	1031	1095	1003	-	-	-	-	-	-	-	
Std																		
Dev.S	933	1620	633	367	473	377	577	228	429	394	-	-	-	-	-	-	-	
MFI																		
%CV	11%	15%	8%	15%	7%	31%	54%	22%	39%	39%	-	-	-	-	-	-	-	

Table 22a. Individual laboratory results for Serum #125 - #126 - class II by One Lambda Single Antigen

**** Serum 125 ****									**** Serum 126 ****											Manufacturer		
Ctr	DQ7	DQ8	DQ9	DR4	DR53	DQA1*03	DQA1*05	Other	Ctr	DQ4	DQ5	DQ6	DR1	DR10	DR51	DR9	DR103	DR4	DR14	Other	Manufacturer	
230	10855	6433	5739	7753	3961				230	7417	18369	14076	25067	14058	15243	9346	20191				One Lambda	
774	9602	8404	7996	6610	3005				774	7786	15306	13612	19306	8782	11127	5678	14457				One Lambda	
792	8648	7762	7437	6251	2680				792	7869	14285	13009	18932	10992	12388	7775	16248	3204	1621		One Lambda	
1160	5815	4866	4556	4416	1474				1160	4740	10919	9510	17604	8395	11376	5832	14958				One Lambda	
1426	6283	5232	4921	4152	2344				1426	6590	14466	12203	20996	11768	13915	8847	18081	3173	2656		One Lambda	
2400	5459	4745	4313	5141	2130				2400	7855	16275	14334	24152	14974	16857	10021	21490	3252	2183		One Lambda	
3224	10034	8649	8344	7270	2972	1287			3224	9472	17021	15764	20711	13067	13999	9320	17825	3390	1796		One Lambda	
3753	6299	4766	5140	5470	2189				3753	5609	12570	11035	21033	10594	11966	6145	19002	2666			One Lambda	
5214	7689	6505	5855	6306	3039				5214	7001	14725	13250	21439	12783	13472	8458	18707				One Lambda	
8001	9844	8553	8440	7018	2932	1348			8001	9394	17842	16089	22356	12626	13142	8192	18252	2841	1100	DQA1*05	One Lambda	
8035	10596	8818	8539	8179	4738	6554	9153	DR9,DQA1*06	8035	7619	15348	13917	22212	12226	13938	8136	18318	2378	1330	DQA1*01, DQA1*03, DQA1*05	One Lambda, Immucor	
8050	6125	5040	4622	5085	2531				8050	4595	11728	9711	19816	8720	10923	4618	14397	2018			One Lambda	
8062	14600	13400	13000	10800	5500	2200	1000	DR9	8062	14200	24800	23800	27600	15500	18200	11000	21800	4800	1943	DQA1*05	One Lambda	
8083	11049	9528	9373	8168	3512				8083	8843	17860	16603	22574	12011	12303	7571	17678	3147			One Lambda	
8096	3391	2882	2507	2916	1615	3943	3900	DQA1*06	8096	7428	14964	13363	22010	12476	15137	8156	19165	3819	1619	DQA1*01,DQA1*03	One Lambda	
Avg	8419	7039	6719	6369	2975	3066	4684		Avg	7761	15765	14018	21721	11931	13599	7940	18038	3153	1781			
Std									Std													
Dev.S	2898	2638	2640	1964	1098	2225	4133		Dev.S	2303	3327	3413	2527	2152	2096	1748	2274	738	489			
MFI									MFI													
%CV	34%	37%	39%	31%	37%	73%	88%		%CV	30%	21%	24%	12%	18%	15%	22%	13%	23%	27%			

Blue = DSA against cell #115 only
 Gold = DSA against cell #116 only
 Green = DSA against cell #121 and #122

Table 22b. Individual laboratory results for Serum #125 - #126 - class II by Lifecodes-Immucor Single Antigen

**** Serum 125 ****									**** Serum 126 ****											Manufacturer	
Ctr	DQ7	DQ8	DQ9	DR4	DR53	DQA1*03	DQA1*05	Other	Ctr	DQ4	DQ5	DQ6	DR1	DR10	DR51	DR9	DR103	DR4	DR14	Other	Manufacturer
4661	2703	2224	2239	4194	1169				4661	2041	3798	4502	9126	3256	5205	2452		1583			Lifecodes
8029	1610	1674	1440	3313	847				8029	1164	2254	2844	8308	2983	4940	2045	8204	870			Lifecodes
8103	1089	1106	719	2115		1094		DQ3	8103	886	1502	2240	7723	2604	3709	1559	5791	647		DQA1*01	Lifecodes
Avg	1801	1668	1466	3207	1008	-	-		Avg	6931	1364	2518	3195	8386	2948	4618	2019	6998	1033	-	
Std									Std												
Dev.S	824	559	760	1044	228	-	-		Dev.S	1966	603	1171	1171	705	327	798	447	1706	489	-	
MFI									MFI												
%CV	46%	34%	52%	33%	23%	-	-		%CV	28%	44%	46%	37%	8%	11%	17%	22%	24%	47%	-	

Paper Challenge

Table 23. Individual Virtual crossmatch results for Serum #125 vs Donor# V1

Donor #V1 HLA A*29:02-A*68:03-B*40:02-B*44:03-C*03:04-C*16:01-DRB1*04:07-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQA1*03:01-DQB1*02:02-DQB1*03:02:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	125	91	Positive	B61(8348) B44(17518)	Positive	DR4(4956) DR53(2303) DQ8(4663)	Unacceptable	
230	125	90	Positive	B61(8844) B44(21678)	Positive	DR4(7753) DR53(3900) DQ8(6433)	Unacceptable	
774	125	89	Positive	B61(8289) B44(19022)	Positive	DR4(6610) DR53(3005) DQ8(8404)	Unacceptable	
792	125	95	Positive	B61(8977) B44(16044)	Positive	DR4(6521) DR53(2680) DQ8(7762)	Unacceptable	
1426	125	96%	Positive	B61(6780) B44(14825)	Positive	DR4(4027) DR53(2206) DQ8(5071)	Unacceptable	
1461	125	17	Positive	B61(1943) B44(7112)	Positive	DR4(2315) DR53(511) DQ8(1035)	Unacceptable	
2400	125	90%	Positive	B61(7531) B44(17056)	Positive	DR4(4887) DR53(2062) DQ8(4667)	Unacceptable	
3224	125	80	Positive	B61(10853) B44(19703)	Positive	DR4(7270) DR53(2972) DQ8(8649)	Unacceptable	
3753	125	93.49	Positive	B61(7481) B44(18109)	Positive	DR4(5470) DR53(2189) DQ8(4766)	Unacceptable	
3966	125	94%	Positive	B61(10010) B44(17955) A29(1787)	Positive	DR4(6759) DR53(2877) DQ8(5872) DQA1*03(7206)	Unacceptable	DRB1*04:07 not covered in SAB panel
4661	125	62	Positive	B61(1540) B44(5821)	Positive	DR4(3945) DR53(1169) DQ8(2224)	Unacceptable	41T, 162GLS, 48Q6, 55PP, 96Y2
8001	125	95	Positive	B61(11656) B44(21305)	Positive	DR53(2932) DQ8(8553) DQA1*03(527)	Unacceptable	A*68:03 not included in LSAB panel, DRB1*04:07 not included in LSAB panel
8029	125	17%	Positive	B44(9076)	Positive	DR4(3313) DR53(847) DQ8(1674)	Unacceptable	
8035	125	90	Positive	B61(12249) B44(20738)	Positive	DR4(6805) DR53(4739) DQ8(8818) DQA1*03(5244)	Unacceptable	As per our program, this is Unacceptable- However, some programs may have other options as desensitization--if they can make sure the DSAs are not, Our B cell Positivity is based on both Class I and II DSA. Complement binding.
8050	125	95	Positive	B61(8875) B44(19300)	Positive	DR4(5085) DR53(2531) DQ8(5040)	Unacceptable	
8062	125		Positive	B61(13500) B44(25700)	Positive	DR4(10800) DR53(5500) DQ2(1000) DQ8(13400)	Unacceptable	
8080	125	97	Positive	B61(12856) B44(22369)	Positive	DR4(7486) DR53(7915) DQ8(7235)	Unacceptable	
8083	125	94.73	Positive	B61(10757) B44(20582)	Positive	DR53(3512) DQ8(9528)	Unacceptable	Also due to expression of Class I on B cells. Possible DSA to DRB1*04:07, but no bead to confirm
8096	125		Positive	B61(4089) B44(9704)	Positive	DR4(3219) DR53(1585) DQ8(4080)	Unacceptable	
8103	125	14	Positive	B40(1071) B44(5288)	Positive	DR4(2115) DQ3(1106) DQ8(1106) DQA1*03(1094)	Unacceptable	
8111	125	86	Positive	B61(7300) B44(16000)	Positive	DR4(5100) DR53(2300) DQ8(5900)	Unacceptable	

Table 24. Individual Virtual crossmatch results for Serum #125 vs Donor# V2

Donor #V2 HLA A*24:02-A*26:03-B*51:01-B*15:01-C*14:02-C*15:02-DRB1*09:01:02G-DRB1*14:03-DRB3*01:01-DRB4*01:03-DQA1*03:02-DQA1*05:07-DQB1*03:01:01G-DQB1*03:03-DPA1*01:03:01G-DPA1*02:02-DPB1*02:01:02G-DPB1*05:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	125	91	Positive	A24(2835) B62(1302) Cw15(3010)	Positive	DR53(2303) DQ7(8344) DQ9(6966)	Unacceptable	
230	125	90	Negative	No Class I DSA	Positive	DR53(3961) DQ9(5736)	Unacceptable	
774	125	89	Negative	No Class I DSA	Positive	DR53(2647) DQ7(9602) DQ9(7996)	Unacceptable	
792	125	95	Positive	A24(2347) Cw15(2258)	Positive	DR53(2680) DQ7(8648) DQ9(7437)	Unacceptable	
1426	125	96%	Borderline	A24(1058) B62(1086) Cw15(2752)	Positive	DR53(2206) DQ7(6142) DQ9(4787)	Unacceptable	
1461	125	17	Positive	A24(796)	Positive	DR53(511) DQ7(961) DQ9(896)	Unacceptable	
2400	125	90%	Negative	A24(1725) Cw15(1378)	Positive	DR53(2002) DQ7(5399) DQ9(4272)	Unacceptable	
3224	125	80	Positive	A24(3299) B62(1591) Cw15(3276)	Positive	DR53(2972) DQ7(10034) DQ9(8344)	Unacceptable	
3753	125	93.49	Negative	Cw15(2864)	Positive	DR53(2189) DQ7(6299) DQ9(5140)	Unacceptable	
3966	125	94%	Positive	A24(3101) B62(1643) Cw15(2891)	Positive	DR53(2877) DQ7(6976) DQ9(6161) DQA1*03(7206)	Unacceptable	
4661	125	62	Positive	A24(950)	Positive	DR53(1169) DQ7(2373) DQ9(2239)	Unacceptable	163TG, 48Q6, 55PP
8001	125	95	Positive	A24(2689) B62(1545) Cw15(2819)	Positive	DR53(2932) DQ7(9844) DQ9(8440) DQA1*03(8553)	Unacceptable	A*26:03 not included in LSAB panel. DRB1*14:03 and DQA1*05:07 are not included in LSAB panel
8029	125	17%	Positive	A24(1175)	Positive	DQ7(1610)	Unacceptable	Low RISK
8035	125	90%	Borderline	A24(1186) B62(2017) Cw15(5626)	Positive	DR9(868) DR53(5108) DQ7(10596) DQ9(8539) DQA1*03(12119)	Unacceptable	In cases like these we would recommend a real cross match because the strength of the reaction will depend on the density of the antigens on a specific donor. Note, no bead to assess DQA1*05:07. As per our program, this is Unacceptable-However, some programs may have other options as desensitization--if they can make sure the DSAs are not Complement binding.
8050	125	95	Negative	B62(1110) Cw15(4070)	Positive	DR53(2531) DQ7(6125) DQ9(4622)	Unacceptable	
8062	125		Positive	A24(2200) B62(2200) Cw15(6200)	Positive	DR9(1300) DR53(5500) DQ7(14600) DQ9(13000)	Unacceptable	
8080	125	97	Positive	A24(3763) B62(1879) Cw15(4239)	Positive	DR53(4265) DQ7(11710) DQ9(10965)	Unacceptable	
8083	125	94.73	Positive	A24(2937) B62(1416) Cw15(3002)	Positive	DR53(3512) DQ7(11049) DQ9(9373)	Unacceptable	Also due to expression of Class I on B cells
8096	125		Positive	Cw15(1161)	Positive	DR53(1585) DQ7(4680) DQ9(3660) DQA1*03(4080)	Unacceptable	
8103	125	14	Positive	A24(550) B15(3933)	Positive	DQ3(1106) DQ7(1086) DQ9(719) DQA1*03(1094)	Unacceptable	
8111	125	86	Negative	A24(1500) Cw15(1500)	Positive	DR53(2300) DQ7(6100) DQ9(4700)	Unacceptable	Possible WEAK POS between Serum #125 and Donor V2

Table 25. Individual Virtual crossmatch results for Serum #125 vs Donor# V3

Donor #V3 HLA 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

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	125	91	Positive	B62(1302) B44(17518)	Positive	no class II DSA	Unacceptable	Positive due to Class I DSA
230	125	90	Positive	B44(21678)	Positive	no class II DSA	Unacceptable	Due to class I DSA
774	125	89	Positive	B44(19022)	Positive	no class II DSA	Unacceptable	
792	125	95	Positive	B44(16044)	Positive	no class II DSA	Unacceptable	
1426	125	96%	Positive	B62(1086) B44(14825)	Positive	no class II DSA	Unacceptable	
1461	125	17	Positive	B44(7112)	Positive	no class II DSA	Unacceptable	
2400	125	90%	Positive	B44(17056)	Positive	no class II DSA	Unacceptable	Positive due to Class I reactivity.
3224	125	80	Positive	B62(1591) B44(19703)	Positive	no class II DSA	Unacceptable	
3753	125	93.49	Positive	B44(18109)	Positive	no class II DSA	Unacceptable	
3966	125	94%	Positive	B62(1643) B44(17955)	Positive	no class II DSA	Unacceptable	
4661	125	62	Positive	B44(5821)	Positive	no class II DSA	Unacceptable	41T, 162GLS
8001	125	95	Positive	B62(1545) B44(21305)	Positive	no class II DSA	Unacceptable	A*26:02 & C*14:03 are not included in LSAB panel. DRB1*08:03, DRB1*13:02 & DPB1*02:02 are not included in LSAB panel.
8029	125	17%	Positive	B44(9076)	Positive	no class II DSA	Unacceptable	
8035	125	90%	Positive	B62(2017) B44(20738)	Positive	no class II DSA	Unacceptable	As per our program, this is Unacceptable-However, some programs may have other options as desensitization--if they can make sure the DSAs are Complement binding. Our B cell Positivity is based on Class I DSA.
8050	125	95	Positive	B62(1110) B44(19300)	Positive	no class II DSA	Unacceptable	
8062	125		Positive	B62(2200) B44(25700)	Positive	no class II DSA	Unacceptable	
8080	125	97	Positive	B62(1879) B44(22369) A26(3032)	Positive	no class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	125	94.73	Positive	B62(1416) B44(20582)	Positive	no class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	125		Positive	B44(9704)	Positive	no class II DSA	Unacceptable	
8103	125	14	Positive	B15(3933) B44(5288)	Positive	no class II DSA	Unacceptable	Strong Class 1 antibodies
8111	125	86	Positive	B62(1000) B44(15000)	Positive	DR53(2400) DQ7(6000) DQ9(4800)	Unacceptable	

Table 26. Individual Virtual crossmatch results for Serum #125 vs Donor# V4

Donor #V4 HLA A*02:06-A*68:03-B*35:12-B*48:01-C*04:01-C*08:01-DRB1*04:07-DRB1*08:02-DRB4*01:03-DQA1*03:01-DQA1*04:01-DQB1*03:02:01G-DQB1*04:02-DPA1*01:03-DPB1*04:02

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	125	91	Negative	B48(1049)	Positive	DR4(4956) DR53(2303) DQ8(4663)	Unacceptable	Unacceptable due to Class II DSA
230	125	90	Negative	No Class I DSA	Positive	DR4(7753) DQ8(6433)	Unacceptable	
774	125	89	Negative	No Class I DSA	Positive	DR4(6610) DR53(3005) DQ8(8404)	Unacceptable	
792	125	95	Negative	No Class I DSA	Positive	DR4(6521) DR53(2680) DQ8(5188)	Unacceptable	
1426	125	96%	Negative	No Class I DSA	Positive	DR4(4027) DR53(2206) DQ8(5071)	Unacceptable	
1461	125	17	Negative	No Class I DSA	Positive	DR4(2315) DR53(511) DQ8(1035)	Unacceptable	
2400	125	90%	Negative	No Class I DSA	Positive	DR4(4887) DR53(2002) DQ8(4667)	Unacceptable	No Class I DSA, but Class II DSA is present.
3224	125	80	Negative	No Class I DSA	Positive	DR4(7270) DR53(2972) DQ8(5359)	Unacceptable	
3753	125	93.49	Negative	No Class I DSA	Positive	DR4(5470) DR53(2189) DQ8(4766)	Unacceptable	
3966	125	94%	Negative	No Class I DSA	Positive	DR4(6759) DR53(2877) DQ8(5872) DQA1*03(7206)	Unacceptable	
4661	125	62	Negative	No Class I DSA	Positive	DR4(3945) DR53(1169) DQ8(2224)	Unacceptable	96Y2, 48Q6, 55PP
8001	125	95	Borderline	Cw4(752)	Positive	DR53(2932) DQ8(8553) DQA1*03(527)	Unacceptable	A*68:03, B*35:12 are not included in LSAB panel. DRB1*08:02, DRB1*04:07 are not included in LSAB panel.
8029	125	17%	Negative	No Class I DSA	Positive	DR4(3313) DR53(847) DQ8(1550)	Unacceptable; Intermediate risk	Virtual B CELL Prediction POSITIVE
8035	125	90%	Negative	Cw4(1383)	Positive	DR4(6805) DR53(5108) DQ8(8818) DQA1*03(5244)	Unacceptable	Based on Class II DSA. As per our program, this is Unacceptable-However, some programs may have other options as desensitization--if they can make sure the DSAs are not Complement binding.
8050	125	95	Negative	No Class I DSA	Positive	DR4(5085) DR53(2531) DQ8(5040)	Unacceptable	
8062	125		Negative	Cw4(1100) B35(1000)	Positive	DR4(10800) DR53(5500) DQ8(13400)	Unacceptable	
8080	125	97	Negative	No Class I DSA	Positive	DR4(7486) DR53(4265) DQ8(7235)	Unacceptable	B Cell prediction Positive
8083	125	94.73	Negative	No Class I DSA	Positive	DR53(3512) DQ8(9528)	Unacceptable	Possible DSA to DRB1*04:07, but no bead to confirm
8096	125		Negative	No Class I DSA	Positive	DR4(3219) DR53(1585) DQ8(4080)	Unacceptable	
8103	125	14	Negative	No Class I DSA	Borderline	DR4(2115) DQ3(1106) DQ8(1106) DQA1*03(1094)	Acceptable	Low level Class 2. Possible cross reacting DRB1*04 antibody.
8111	125	86	Negative	No Class I DSA	Positive	DR4(5200) DR53(2300) DQ8(5100)	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #126 vs Donor# V1

Donor #V1 HLA A*29:02-A*68:03-B*40:02-B*44:03-C*03:04-C*16:01-DRB1*04:07-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQA1*03:01-DQB1*02:02-DQB1*03:02:01G-DPA1*01:03-DPA1*02:01-DPB1*04:01:01G-DPB1*14:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	126	95	Positive	A29(3887) Cw10(10921) Cw16(2124)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA
230	126	87	Positive	A29(5890) Cw10(14479)	Positive	No Class II DSA	Unacceptable	Due to Class I
774	126	90	Positive	A29(3735) Cw10(10369)	Positive	No Class II DSA	Unacceptable	
792	126	97	Positive	A29(4353) Cw10(10227) Cw16(2240)	Positive	DR4(3204)	Unacceptable	
1426	126	98%	Positive	A29(4454) A68(1292) Cw10(9945) Cw16(2862)	Positive	No Class II DSA	Unacceptable	
1461	126	19	Positive	A29(771) Cw10(2536)	Positive	DR4(650)	Unacceptable	
2400	126	97%	Positive	A29(6298) A68(1548) Cw10(14220) Cw16(3539)	Positive	No Class II DSA	Unacceptable	Positive due to Class I reactivity.
3224	126	92	Positive	A29(5447) Cw10(12652) Cw16(2843)	Positive	No Class II DSA	Unacceptable	
3753	126	93.62	Positive	A29(3888) Cw10(10114) Cw16(2030)	Positive	No Class II DSA	Unacceptable	
3966	126	98%	Positive	A29(4866) A68(3873) Cw10(10770) Cw16(2410)	Positive	DR4(2360) DQA1*03(5483)	Unacceptable	A*68:03 not covered in SAB panel
4661	126	5	Positive	Cw10(2418)	Positive	No Class II DSA	Unacceptable	173K
8001	126	93	Positive	A29(5944) Cw10(12990)	Positive	No Class II DSA	Unacceptable	A*68:03 not included in LSAB panel;
8029	126	19%	Positive	A29(1313) Cw10(3935)	Positive	DR4(870)	Intermediate risk	DRB1*04:07 not included in LSAB panel
8035	126	91%	Positive	A29(5567) Cw10(13107) Cw16(2667)	Positive	No Class II DSA	Unacceptable	In cases like these we would recommend a real cross match because the strength of the reaction will depend on the density of the antigens on a specific donor. NO Class II DSA DETECTED
8050	126	94	Positive	A29(2465) Cw10(8744) Cw16(1533)	Positive	No Class II DSA	Unacceptable	
8062	126		Positive	A29(8300) Cw10(17900) Cw16(4400)	Positive	DQ2(1900)	Unacceptable	DRB1*04:07 is not among SAB panel
8080	126	95	Positive	B61(12856) B44(22369)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	126	96.55	Positive	A29(5815) Cw10(16660) Cw16(2835)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells. Possible DSA to DRB1*04:07, but no bead to confirm
8096	126		Positive	A29(3679) Cw10(10676) Cw16(2114)	Positive	DR4(3635)	Unacceptable	
8103	126	10	Positive	A29(5899) Cw10(1749) Cw3(2524)	Positive	DR4(647)	Unacceptable	
8111	126	91	Positive	A29(3850) Cw10(8500) Cw16(1700)	Positive	DR4(1600)	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #126 vs Donor# V2

Donor #V2 HLA A*24:02-A*26:03-B*51:01-B*15:01-C*14:02-C*15:02-DRB1*09:01:02G-DRB1*14:03-DRB3*01:01-DRB4*01:03-DQA1*03:02-DQA1*05:07-DQB1*03:01:01G-DQB1*03:03-DPA1*01:03:01G-DPA1*02:02-DPB1*02:01:02G-DPB1*05:01:01G

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	126	95	Positive	B62(8339) Cw14(2110) Cw15(2186)	Positive	DR9(7155)	Unacceptable	
230	126	87	Positive	B62(10536)	Positive	DR9(9346)	Unacceptable	
774	126	90	Positive	B62(3498)	Positive	DR9(5678)	Unacceptable	
792	126	97	Positive	B62(7335) Cw14(1909) Cw15(1929)	Positive	DR9(7540) DR14(1621)	Unacceptable	
1426	126	98%	Positive	B62(8675) A26(1196) Cw14(2705) Cw15(2546)	Positive	DR9(8598)	Unacceptable	
1461	126	19	Positive	B62(2965)	Positive	DR9(2233)	Unacceptable	
2400	126	97%	Positive	B62(10785) A26(1994) Cw14(2912) Cw15(2682)	Positive	DR9(9681)	Unacceptable	
3224	126	92	Positive	B62(9258) A26(1405) Cw14(2352) Cw15(2709)	Positive	DR9(9320)	Unacceptable	
3753	126	93.62	Positive	B62(7678) Cw15(2134)	Positive	DR9(6145)	Unacceptable	
3966	126	98%	Positive	B62(9852) A26(1874) Cw14(2523) Cw15(2522)	Positive	DR9(5774) DR14(1609)	Unacceptable	A*26:03 not covered in SAB panel. DRB1*14:03 not covered in SAB panel.
4661	126	5	Positive	B62(1505)	Positive	DR9(2452)	Unacceptable	44RMA; 13FE
8001	126	93	Positive	B62(9766)	Positive	DR9(8192)	Unacceptable	A*26:03 not included in LSAB panel. DRB1*14:03, DQA1*05:07 not included in LSAB panel.
8029	126	19%	Positive	B62(4376)	Positive	DR9(2045)	Unacceptable	Intermediate risk
8035	126	91%	Borderline	B62(4836) Cw14(2146) Cw15(3159)	Positive	DR9(8503)	Unacceptable	In cases like these we would recommend a real cross match because the strength of the reaction will depend on the density of the antigens on a specific donor. Note, no bead for DQA1*05:07. Our B cell Positivity is based on both Class I and II DSA.
8050	126	94	Negative	B62(2792) Cw14(1113) Cw15(1853)	Positive	DR9(4618)	Unacceptable	
8062	126		Positive	B62(11200) A26(2200) Cw14(3300) Cw15(4800)	Positive	DR9(11000) DR14(1900)	Unacceptable	
8080	126	95	Positive	B62(11789) Cw14(2839) Cw15(3061)	Positive	DR9(10509)	Unacceptable	
8083	126	96.55	Positive	B62(10195) Cw14(2141) Cw15(2544)	Positive	DR9(7392)	Unacceptable	Also due to expression of Class I on B cells
8096	126		Positive	B62(6447) Cw14(1843) Cw15(2423)	Positive	DR9(8058) DR14(1472)	Unacceptable	
8103	126	10	Positive	B15(2319)	Positive	DR9(1559)	Unacceptable	
8111	126	91	Positive	B62(6700) A26(1000) Cw14(1400) Cw15(1500)	Positive	DR9(6300)	Unacceptable	

Table 29. Individual Virtual crossmatch results for Serum #126 vs Donor# V3

Donor #V3 HLA 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

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	126	95	Positive	B62(8339) Cw9(13534) Cw14(3250)	Positive	DQ6(10772)	Unacceptable	Donor types as DQB1*06:01 and DQB1*06:04. Serum 126 show DSA to both allele with MFIs of 10772 and 9072.
230	126	87	Positive	B62(10536) Cw9(19055)	Positive	DQ6(14076)	Unacceptable	
774	126	90	Positive	B62(3498) Cw9(13576)	Positive	DQ6(13612)	Unacceptable	
792	126	97	Positive	B62(7335) Cw9(12979) Cw14(1909)	Positive	DQ6(13009)	Unacceptable	
1426	126	98%	Positive	B62(8675) A26(1196) Cw9(14010) Cw14(2705)	Positive	DQ6(12026)	Unacceptable	
1461	126	19	Positive	B62(2965) Cw9(3342)	Positive	DQ6(2585) DQA1*01(2585)	Unacceptable	
2400	126	97%	Positive	B62(10785) A26(1994) Cw9(17575) Cw14(2912)	Positive	DQ6(13336)	Unacceptable	
3224	126	92	Positive	B62(9258) A26(1405) Cw9(15674) Cw14(2352)	Positive	DQ6(13211) DQA1*01(15764)	Unacceptable	
3753	126	93.62	Positive	B62(7678) Cw9(15711)	Positive	DQ6(11035)	Unacceptable	
3966	126	98%	Positive	B62(9857) A26(1874) Cw9(14578) Cw14(2523)	Positive	DQ6(7858) DQA1*01(8351)	Unacceptable	
4661	126	5	Positive	B62(1505) Cw9(3109)	Positive	DQ6(4502)	Unacceptable	44RMA, 173K; 52PR
8001	126	93	Positive	B62(9766) Cw9(16349)	Positive	DQ6(13351)	Unacceptable	A*26:02 & C*14:03 are not included in LSAB panel; DRB1*08:03,DRB1*13:02 & DPB1*02:02 are not included in LSAB panel
8029	126	19%	Positive	B62(4376)	Positive	DQ6(2844)	Unacceptable	Intermediate risk
8035	126	91%	Positive	B62(4836) A26(2132) Cw9(16909) Cw14(6710)	Positive	DQ6(13162) DQA1*01(14631)	Unacceptable	As per our program, this is Unacceptable-However, some programs may have other options as desensitization--if they can make sure the DSAs are not Complement binding. Our B cell Positivity is based on both Class I and II DSA.
8050	126	94	Positive	B62(2792) Cw9(14164) Cw14(1113)	Positive	DQ6(9711)	Unacceptable	
8062	126		Positive	B62(11200) A26(2200) Cw9(22000)	Positive	DQ6(23600)	Unacceptable	
8080	126	95	Positive	B62(11789) A26(2417) Cw9(19867) Cw14(9141)	Positive	DQ6(29060)	Unacceptable	
8083	126	96.55	Positive	B62(10195) Cw9(16660)	Positive	DQ6(13596)	Unacceptable	Also due to expression of Class I on B cells
8096	126		Positive	B62(6447) Cw9(13733) Cw14(1843)	Positive	DQ6(16090) DQA1*01(16090)	Unacceptable	
8103	126	10	Positive	B15(2319) B62(2319) Cw3(2524) Cw9(2524)	Positive	DQ6(2240) DQA1*01(2240)	Unacceptable	
8111	126	91	Positive	B62(6700) A26(1000) Cw9(13000)	Positive	DQ6(9000)	Unacceptable	

Table 30. Individual Virtual crossmatch results for Serum #126 vs Donor# V4

Donor #V4 HLA A*02:06-A*68:03-B*35:12-B*48:01-C*04:01-C*08:01-DRB1*04:07-DRB1*08:02-DRB4*01:03-DQA1*03:01-DQA1*04:01-DQB1*03:02:01G-DQB1*04:02-DPA1*01:03-DPB1*04:02

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Predicted Risk Assessment	Comments
54	126	95	Positive	Cw8(6015)	Positive	DQ4(5933)	Unacceptable	
230	126	87	Borderline	Cw8(6964)	Positive	DQ4(7417)	Unacceptable	
774	126	90	Negative	No Class I DSA	Positive	DR4(2964) DQ4(7786)	Unacceptable	
792	126	97	Positive	Cw8(5337)	Positive	DR4(3204) DQ4(4739)	Unacceptable	
1426	126	98%	Positive	A68(1292) Cw8(6596)	Positive	DQ4(6432)	Unacceptable	
1461	126	19	Positive	Cw8(861)	Positive	DR4(650) DQ4(1089)	Unacceptable	
2400	126	97%	Positive	A68(1548) Cw8(7393)	Positive	DQ4(7141)	Unacceptable	
3224	126	92	Borderline	Cw8(6552)	Borderline	DQ4(5595)	Unacceptable	Need a physical crossmatch. High immunological risk due to DSAs
3753	126	93.62	Borderline	Cw8(5106)	Positive	DQ4(5609)	Unacceptable	
3966	126	98%	Positive	A68(3873) Cw8(6695)	Positive	DR4(2360) DQ4(4411) DQA1*03(5483)	Unacceptable	A*68:03 not covered in SAB panel
4661	126	5	Negative	No Class I DSA	Positive	DQ4(2041)	Unacceptable	52PR
8001	126	93	Negative	No Class I DSA	Positive	DQ4(7157)	Unacceptable	A*68:03 & B*35:12 are not included in LSAB panel. DRB1*08:02, DRB1*04:07 not included in LSAB panel.
8029	126	19%	Borderline	Cw8(1317)	Positive	DR4(870) DQ4(1164)	Unacceptable	Low RISK
8035	126	91%	Negative	Cw8(6006)	Borderline	DQ4(6866)	Unacceptable	In cases like these we would recommend a real cross match because the strength of the reaction will depend on the density of the antigens on a specific donor. As per our program, this is Unacceptable-However, some programs may have other options as desensitization--if they can make sure the DSAs are not Complement binding.
8050	126	94	Negative	Cw8(4510)	Positive	DQ4(4595)	Unacceptable	
8062	126		Positive	Cw8(9400)	Positive	DQ4(14200)	Unacceptable	DRB1*04:07 is not among SAB panel
8080	126	95	Positive	Cw8(8628)	Positive		Unacceptable	
8083	126	96.55	Positive	Cw8(6569)	Positive	DQ4(7000)	Unacceptable	Also due to expression of Class I on B cells. Possible DSA to DRB1*04:07, but no bead to confirm
8096	126		Positive	Cw8(6009)	Positive	DR4(3635) DQ4(9401) DQA1*03(9401)	Unacceptable	
8103	126	14	Borderline	Cw8(531)	Borderline	DR4(647) DQ4(886)	Acceptable	Low MFI Class 1 and possible crossreactive class 2 antibodies
8111	126	91	Positive	Cw8(4500)	Positive	DR4(1700) DQ4(4500)	Unacceptable	

Table 31: Individual Cutoff values and Pretreatment - Exchange 21

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreatment	
230	A	4000	DRB1	4000	One Lambda	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	DTT	
	B	2000	DRB3/4/5	2000			
	C	5000	DQA1	2000			
	Class I			DQB1			2000
				DPB1			5000
			Class II	2000			
792	A	1500	DRB1	1500	One Lambda	FBS/EDTA	
	B	1500	DRB3/4/5	1500			
	C	1500	DQA1	1500			
	Class I			DQB1			1500
				DPB1			1500
			Class II	1500			
1160	A		DRB1		One Lambda	EDTA	
	B		DRB3/4/5				
	C		DQA1				
	Class I	1000		DQB1			
				DPB1			
			Class II	1000			
1426	A	1000	DRB1	1000	One Lambda	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	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	EDTA	
	B		DRB3/4/5				
	C		DQA1				
	Class I	1000		DQB1			
				DPB1			
			Class II	1000			
3753	A	1000	DRB1	1000	One Lambda	DTT	
	B	1000	DRB3/4/5	1000			
	C	2000	DQA1	1000			
	Class I	1000		DQB1			1000
				DPB1			2000
			Class II	1000			
4661	A	400	DRB1	400	Lifecodes-Immucor	DTT	
	B	500	DRB3/4/5	400			
	C	750	DQA1	750			
	Class I	750		DQB1			750
				DPB1			750
			Class II	750			
5214	A	2000	DRB1	2000	One Lambda	FCS & EDTA	
	B	2000	DRB3/4/5	2000			
	C	2000	DQA1	2000			
	Class I	2000		DQB1			2000
				DPB1			2000
			Class II	2000			
8001	A		DRB1		One Lambda	EDTA	
	B		DRB3/4/5				
	C		DQA1				
	Class I	1000		DQB1			
				DPB1			
			Class II	1000			
8029	A	500	DRB1	500	Lifecodes-Immucor	None	
	B	500	DRB3/4/5	500			
	C	500	DQA1	500			
	Class I	500		DQB1			500
				DPB1			500
			Class II	500			

Table 31: Individual Cutoff values and Pretreatment - Exchange 21

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreatment	Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera pretreatment	
8035	A	700	DRB1	700	One Lambda, Lifecodes-Immucor	DTT, FCS	8083	A		DRB1		One Lambda	EDTA	
	B	700	DRB3/4/5	700				B	DRB3/4/5					
	C	700	DQA1	700				C	DQA1					
	Class I			DQB1				700	Class I	2000	DQB1			
				DPB1				700		DPB1				
				Class II						Class II	2000			
8050	A	1000	DRB1	1000	One Lambda	DTT	8096	A		DRB1		One Lambda	DTT	
	B	1000	DRB3/4/5	1000				B	DRB3/4/5					
	C	1000	DQA1	1000				C	DQA1					
	Class I			DQB1				1000	Class I		DQB1			
				DPB1				1000		DPB1				
				Class II				1000		Class II				
8062	A	1000	DRB1	1000	One Lambda	DTT	8103	A	118	DRB1	78	Lifecodes-Immucor	Heat Inactivation	
	B	1000	DRB3/4/5	1000				B	115	DRB3/4/5	78			
	C	1000	DQA1	1000				C	107	DQA1	71			
	Class I			DQB1				1000	Class I	16303	DQB1			71
				DPB1				1000		DPB1	61			
				Class II						Class II	18036			