

Report of the 20th Single Antigen, Flow and Virtual Crossmatch Exchange

February 1, 2021

Cells	115-116
Serum	117-120

For Exchange 20, Serum 114 (patient 2) and virtual donor V1 from Exchange 19 (June 2020) were re-examined as serum 117 and cell 115. A comparison of virtual crossmatch (VXM) predictions (serum 114 vs. V1) against the physical flow crossmatch (FXM) (**serum 117 vs. cell 115**) are summarized in **Part 1** of this report. **Part 2** examines the single antigen da-

ta for the 4 sera examined (**serum nos. 117 - 120**) in this study. **Part 3** summarizes the flow crossmatch results for 2 cells (**cell nos. 115 - 116**) against the 4 sera. Finally, in **Part 4**, the virtual crossmatch predictions for 4 potential donors (V1 - V4) against 2 sera (serum 119 and serum 120) 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 114 vs. donor V1 in Exchange 19. Of the 21 labs, 16 labs reported back physical T-cell FXM results and 15 labs reported physical B-cell FXM results for this patient-donor pair in Exchange 20 (Table 1a). All 16 labs predicting the T-cell FXM to be positive, reported the physical FXM as positive as well in the presence of strong anti-A2 (22603) reactivity

(Table 1b). Good agreement was also achieved between virtual B-cell predictions and the physical B-cell FXM, as 15 labs reported the B-cell FXM as positive in agreement with predictions (Table 1b). At the time of the paper challenge, a number of labs noted the positive prediction was due to the presence of class I DSA (A2), as there were no class II DSA reported against the cell.

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

Exchange 019					Exchange 020				
Virtual Crossmatch - Serum 114 (Patient 2) vs. Donor V1					Physical Flow Crossmatch - Serum 117 vs. Cell 115				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V1	114	16	POS (16)	POS (15) Negative (1)	115	117	16	POS (16)	POS (15) NT (1)

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

		T-cell Virtual XM (Exchange 19)		
		+	-	∅
Physical T-cell FXM (Exchange 20)	+	16		
	-			
	∅			

		B-cell Virtual XM (Exchange 19)		
		+	-	∅
Physical B-cell FXM (Exchange 20)	+	15		1
	-	1		
	∅			

+/- = 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 19, anti-A2 (22937) reactivity was reported against the donor V2. In Exchange 20, anti-A2 reactivity was reported once

again against cell 117, with medium MFI = 22603. No class II DSA were reported against the donor in either study.

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

Cell #115 HLA Genotype: A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Exchange 019					Exchange 020				
Virtual Crossmatch - Serum 114 (Patient 2) vs. Donor V1					Physical Flow Crossmatch - Serum 117 vs. Cell 115				
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(23432)	Positive	No Class II DSA	54	Positive	A*02:01(23,698)	Positive	No Class II DSA
230	Positive	A2(28282)	Negative	No Class II DSA	230	Positive	A2	Positive	No Class II DSA
774	Positive	A2(22727)	Positive	No Class II DSA	774	Positive	A2(22861.18)	Positive	No Class II DSA
792	Positive	A2(21062)	Positive	No Class II DSA	792	Positive	A2(22320)	Positive	No Class II DSA
1426	Positive	A2(20282) A2C(11519)	Positive	No Class II DSA	1426	Positive	A2(23380)	Positive	No Class II DSA
2400	Positive	A2(24613)	Positive	No Class II DSA	2400	Positive	A*02:01(23570)	Positive	No Class II DSA
3753	Positive	A2(22310)	Positive	No Class II DSA	3753	Positive	A2(21434)	Positive	No Class II DSA
3966	Positive	A2(21261)	Positive	DPA1*02(12590)	3966	Positive		Positive	
4661	Positive	A2(10911)	Positive	No Class II DSA	4661	Positive	A*02:01(10501)	Positive	No class II DSA
5214	Positive	A2(23569)	Positive	No Class II DSA	5214	Positive	A2(23495)	Positive	No Class II DSA
8001	Positive	A2(23191)	Positive	No Class II DSA	8001	Positive	A*02:01(24988)	Positive	No Class II DSA
8035	Positive	A2(25112)	Positive	No Class II DSA	8035	Positive	A*02:01(26,333)	Positive	No Class II DSA
8050	Positive	A2(22973)	Positive	No Class II DSA	8050	Positive	A2(22194)	Positive	No Class II DSA
8083	Positive	A2(28575)	Positive	No Class II DSA	8083	Positive	A*02:01(2872)	Positive	No Class II DSA
8096	Positive	A2(12645)	Positive	No Class II DSA	8096	Positive		NT	
8111	Positive	A2(21000)	Positive	No Class II DSA	8111	Positive	A2(20,000) B77(3200)	Positive	No Class II DSA

Part 2

Class I and class II Luminex single antigen results for serum samples 117 - 120 are summarized in Tables 12 - 15 and individual results for each

participating laboratory are listed in Tables 16 – 23. In addition, individual cutoff values and sera pretreatment methods are shown on Table 32.

Antibody Identification

Serum 117: This sample was previously examined as serum 114 in Exchange 19. A comparison of results from Exchange 19 and Exchange 20 showed the reporting of antibodies and antibody strength were consistent across the studies:

Exchange 19		Exchange 20		Exchange 19		Exchange 20	
Class I		Class I		Class II		Class II	
*** Serum 114 ***		*** Serum 117 ***		*** Serum 114 ***		*** Serum 117 ***	
Antigen	Median	Antigen	Median	Antigen	Median	Antigen	Median
A2	22937	A2	22603	DR4	18733	DR4	16935
A24	3146	A24	2782	DPw2	17565	DPw2	16828
A68	15556	A68	15756	DP18	15988	DP18	15137
A69	17626	A69	17065	DP28	15360	DP28	14522
B57	15453	B57	15214	DQ9	15222	DQ9	13889
B58	12893	B58	12858	DQ7	14929	DQ7	13975
A23	2300	A23	2328	DPw3	14188	DPw3	13721
A203	17435	A203	12285	DQ8	14008	DQ8	14160
A2403	1906	A2403	2103	DR11	13550	DR11	13619

A single DSA (A2), with MFI = 22603, was detected against cell 115 in this sample. Strong class II DSA were detected against cell 116, with labs reporting anti-DQ7 (13975) and DP4 (DP402) (15854) reactivity.

Serum 118: Anti-B60 (6251), -B7 (12177), -A3 (2775), -B42 (4480), -B55 (3174), -B61 (3538), and -B67 (4713) reactivity was detected in this sample by > 90% of labs. Additional reactivity to a number of B7C specificities was also detected. Class II reactivity was also detected in this sample, with labs reporting reactivity to DQ6 (9529), DR15 (6652), DR16 (3761), and DR51 (9702) in complete consensus.

Genotypes of cells provided by UCLA

Cell 115 (Filipino) - A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-DPB1*01:01-DPB1*13:01

Cell 116 (Black) - A*03:01-A*30:01-B*41:02-B*42:02-C*17:01-DRB1*08:04-DRB1*15:03-DRB5*01:01-DQA1*01:02:01G-DQA1*05:01:01G-DQB1*03:01-DQB1*06:02-DPB1*04:02:01G-DPB1*105:01

Weak anti-A11 (A1101) (1826) and -Cw7 (1889) reactivity, along with anti-DR15 (6652) and -DR51 (9702) reactivity was detected against cell 115. Multiple DSA were also reported against cell 116, with labs reporting anti-A3 (2775), -B42 (4480), -Cw17 (4831), -DQ6 (9529), -DR15 (6652), and -DR51 (9702) reactivity.

Serum 119: Strong anti-B57 (18251) and -B58 (15165) reactivity was detected in this cell, along with anti-A2 (6375) reactivity. In addition, reactivity to a number of 10C specificities, including A25 (13547), A26 (7855), A32 (5962), A34 (3416), and A43 (4751) was reported by > 90% of labs. Weak class II reactivity was also detected in this sample, with labs reporting anti-DQ7 (4811), -DQ8 (4422), -DQ9 (4559), and -DR7 (5497) reactivity in complete consensus.

Anti-A2 (6375) and -A11 (2726) reactivity was reported against cell 115. Against cell 116, only a single DSA (DQ7) was reported, with MFI = 4811.

Serum 120: Strong reactivity to a number of class I specificities was detected in this sample, including reactivity to B13 (19630), B41 (20606), B44 (16931), B45 (18810), B47 (18245), B48 (19080), B49 (20033), and B50 (19928). Each were reported by 100% of labs. The sample was reported as negative for class II.

No DSA were detected against cell 115 in this sample. By contrast, strong anti-B41 (20606), -Cw17 (11151), and -B42 (2500) reactivity was detected against cell 116.

Conclusion:

Good agreement was achieved for all 4 serum samples in the detection of class I and class II antibodies. MFI values for peak DSA ranged from 12177 to 23302 for class I antibodies and 5497 to 16828 for class II antibodies.

Part 3

Flow cytometric crossmatch results for cell 115 and cell 116 against sera sample nos. 117 - 120 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 115. For cell 115, 7 out of 8 T/B FXM achieved $\geq 80\%$ agreement among labs. Among the FXM in which < 2 discrepancies were observed, reported class I and/or class II DSA MFI were > 6000 . Against cell 120, no agreement was achieved for the T-cell FXM. Interestingly, 13 labs reported it as negative, while 4 labs reported it as positive, and 2 reported borderline results despite the absence of class I DSA.

Cell 116. For cell 116, 6 out of 8 T/B FXM achieved $\geq 80\%$ agreement. Among them, 5 were reported as positive in the presence of multiple class I and/or class II DSA. For serum 117, although there were no DSA detected against the cell, 4 labs reported the T-cell FXM as positive and 1 reported it as borderline. Finally for serum 120, weak anti-DQ7 (4811) reactivity resulted in only 79% of labs to report the B-cell FXM as positive.

Table 2. Summary of Flow crossmatch results for Cell #115 - #116 vs. Serum #117 - #120

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
115	117	22	POS(21) NEG(1) NT(1)	POS(18) NEG(1) NT(3)	116	117	22	NEG(14) POS(4) Borderline(1) NT(3)	POS(18) NEG(1) NT(3)
115	118	22	POS(16) NEG(4) NT(2)	POS(19) NT(3)	116	118	22	POS(20) NEG(1) NT(1)	POS(19) NT(3)
115	119	22	POS(21) NEG(1) NT(1)	POS(18) NEG(1) NT(3)	116	119	22	NEG(20) POS(1) NT(1)	POS(15) Borderline(1) NEG(3) NT(3)
115	120	22	NEG(13) POS(4) Borderline(2) NT(3)	NEG(17) POS(1) Borderline(1) NT(3)	116	120	22	POS(21) NT(1)	POS(18) NEG(1) NT(3)
indicates consensus $< 80\%$									

Conclusion:

For the T-cell FXM, 6 out of 8 were reported with $\geq 80\%$ agreement. The presence of multiple or strong class I DSA (MFI > 20000) were present in the case of the positive crossmatches. For cell 115 vs. serum 120 and cell 116 vs. serum 117, $< 80\%$ of labs reported the FXM as negative. The remaining labs reported the FXM as either positive or borderline despite the absence of class I DSA.

For the B-cell FXM, 7 out of 8 were reported with $\geq 80\%$ agreement. The presence of strong (MFI > 9000) class I and/or class II DSA were reported in the case of the positive B-cell FXM. For the remaining B-cell FXM, cell 116 vs. serum 119, no agreement was achieved. The weakness of the DSA (DQ7) present resulted in 3 labs to report a negative FXM and 1 to report the FXM as borderline instead of positive.

Part 4

Virtual crossmatch predictions for donor V1 - V4 against sera (patient) samples 119 and 120 are summarized in Table 3 and individual laboratory

predictions are listed in Tables 24 - 31. Fictional donor histories precede each patient-donor summary.

Virtual Crossmatch Paper Challenge

For virtual **T-cell predictions** of the expected T-cell FXM, all 8 T-cell VXM achieved $\geq 80\%$ agreement among labs. Among them, 7 out of 8 are predicted to be positive due to the presence of class I DSA with MFI > 6000 .

For virtual **B-cell predictions** of the expected B-cell FXM, all 8 B-cell VXM achieved $\geq 80\%$ agreement among labs. All but 1 VXM, was predicted to be positive due to the presence of class II and/or class I DSA with MFI > 6000 .

Table 3. Summary of Virtual Crossmatch Predictions (Serum #119 - #120 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	119	20	POS(20)	POS(20)	Unacceptable(20)	V2	119	21	POS(20)	POS(20)	Unacceptable(20)
V1	120	20	POS(20)	POS(19) NT(1)	Unacceptable(20)	V2	120	21	NEG(20)	NEG(20)	Acceptable(20)
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	119	20	POS(19) Borderline(1)	POS(19) Borderline(1)	Unacceptable(19) Acceptable(1)	V4	119	21	POS(20)	POS(20)	Unacceptable(20)
V3	120	20	POS(20)	POS(20)	Unacceptable(20)	V4	120	21	POS(20)	POS(20)	Unacceptable(20)

DSA Identification

Patient 1 (Serum 119)

Patient's fictional case history: This individual is a 35 year old male being evaluated for his first transplant. The patient's HLA type is A*03:01-B*07:02-B*40:06-C*07:02-DRB1*15:01-DRB1*15:02-DRB5*01:02-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:02-DPA1*04:01-DPB1*01:01-DRB1*02:01.

Against **donor V1**, anti-A11 (2726), -A66 (6635), and -DQ7 (4811) reactivity was detected in serum 119. The presence of multiple DSA resulted in good agreement to be achieved among T/B-cell predictions, as 20 out of 20 labs predict the expected T-cell and B-cell FXM to be positive. Predicted renal transplant risk for this donor-patient pair, as a result, was assessed to be unacceptable.

For serum 119 against **donor V2**, good agreement was achieved in the reporting of anti-A2 (6375) and -B57 (18251) reactivity. However, agreement among labs in the reporting of class II DSA was < 80%, as 4 labs indicated no class II DSA were present while 13 labs reported weak anti-DR52 (2046) reactivity. T/B-cell virtual predictions were not affected by the discrepancies in class II DSA reporting, as all 20 labs predict the expected T/B-cell FXM to be positive due to class I DSA. Consequently, predicted transplanted risk assessment was reported as unacceptable by all 20 labs.

Against **donor V3**, anti-A26 (7855) and -DR7 (5497) reactivity was reported. Good agreement was achieved for virtual T/B-cell predictions for this donor-patient pair, as 19 labs predict the expected FXM for each to be positive. One lab predicts the T/B-cell FXM for this donor against serum 119 to be borderline, as the DSA (A26, DR7, DQA1*02) it detected against donor V1 were each < 1600 MFI. For renal transplant risk, all but the 1 lab predicting borderline results, predict the risk to be unacceptable.

Anti-A2 (6375) and -DR7 (5497) reactivity was detected against **donor V4** in serum 113 by 20 out of 20 labs. The presence of class I/II DSA of moderate strength resulted in all 20 labs to predict the expected T/B-cell FXM to be positive. Consequently, predicted risk assessment for this donor-patient pair was reported as unacceptable in complete agreement.

Virtual Donors – HLA genotype

Donor 1 (V1): A*11:01-A*66:01-B*41:02-B*44:02:01G-C*05:01-C*17:01:01G-DRB1*08:01-DRB1*13:03-DRB3*01:01-DQA1*04:01:01G-DQA1*05:01:01G-DQB1*03:01-DQB1*04:02-DPA1*01:03:01G-DPB1*04:01-DPB1*06:01

Donor 2 (V2): A*02:01-A*03:01-B*35:03-B*57:03-C*04:01-C*07:01-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQB1*06:04-DPA1*01:05-DPB1*04:01

Donor 3 (V3): A*26:01-A*30:01-B*13:02-B*38:01-C*06:02-C*12:03-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*02:01-DPB1*11:01-DPB1*17:01

Donor 4 (V4): 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

Patient 2 (Serum 120)

Patient's fictional case history: This individual is a 50 year old male being evaluated for his first transplant. The patient's HLA type is A*23:01-A*24:02-B*14:02-B*35:01-C*07:02-C*08:02-DRB1*04:02-DRB1*04:05-DRB4*01:03-DQA1*03:01-DQA1*03:03-DQB1*03:02-DPA1*01:03-DPA1*02:01-DPB1*17:01-DPB1*104:01

Against **donor V1**, strong anti-B41 (20606), -B44 (16931), and Cw17 (11151) reactivity was detected in serum 120. No class II DSA were detected. The presence of these strong antibodies resulted in 100% of labs to predict the expected T/B-cell FXM outcome to be positive for this donor-patient pair. In turn, predicted renal transplant risk was assessed as unacceptable by all 20 labs.

For sample 114 against **donor V2**, neither class I or class II DSA were detected by any lab. As result, all 20 labs predict the expected T/B-cell FXM outcome to be negative. Renal transplant risk was predicted to be acceptable by all 20 labs for this donor-patient pair.

Strong anti-B13 (19630) reactivity was reported against **donor V3** in this sample. No class II DSA were detected. Due to the strength of this class I antibody, all 20 labs predict the expected T/B-cell FXM outcome to be positive. Renal transplant risk, was in turn, predicted to be unacceptable by all 20 labs as well.

Against **donor V4**, a single DSA (B13) of 19630 MFI was reported. All 20 labs predict the T/B-cell FXM outcome to be positive for this donor-patient pair as a result of the strong DSA present. Good agreement (100%) was also achieved for renal transplant risk assessment, with labs predicting the risk of transplant as unacceptable.

Conclusion

Good agreement ($\geq 80\%$) was achieved for all 16 T/B-cell virtual cross-match predictions. For all but 1 of the 16 VXM, immune dominate class I/II DSA of > 6300 MFI were present. This in turn, resulted in labs to predict

the expected T/B-cell FXM to be positive and to predict the expected renal transplant risk to be unacceptable.

NEXT MAILING DATE: March 24, 2021

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

Flow Cytometric Crossmatch

Cell #115 HLA Genotype: A*02:01-A*11:01-B*15:13-B*38:02-C*07:02-C*08:01-DRB1*15:02-DRB5*01:01-DRB5*01:08N-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPA1*02:01-DPA1*02:02-
DPB1*01:01-DPB1*13:01

Table 4. Individual Flow crossmatch results and DSA reported for Cell #115 vs. Serum #117

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	117	61	446			Positive	A*02:01(23,698)	91	370			Positive	No Class II DSA	75	137	YES
230	117	3.5	31.5			Positive	A2	4.5	60.2			Positive	No Class II DSA			YES
615	117	314	742			Positive Strong	A*02:01(22827)	336	692			Positive Strong	No Class II DSA	249	238	YES
774	117	≥ 50	345			Positive	A2(22861.18)	≥ 120	183.5			Positive	No Class II DSA	236	425.5	NO
792	117	52	375			Positive	A2(22320)	106	321			Positive	No Class II DSA	241	282	YES
1160	117	65	526			Positive	A2(19738)	70	444			Positive	None	180	206	YES
1426	117	50	328			Positive	A2(23380)	92	314			Positive	No Class II DSA	347	322	YES
2400	117	18	283			Positive	A*02:01(23570)	24	248			Positive	No Class II DSA. Positive reactivity due to Class I.	85	26	YES
3135	117	1,2	4861	3,2		Positive						NT		1630		NO
3224	117	70	388			Positive	A2(24954)	140	281			Positive	No Class II DSA	167	166	YES
3753	117	50	395			Positive	A2(21434)	100	338			Positive	No Class II DSA	208	225	YES
3966	117	20	396			Positive		50	315			Positive		169	258	NO
4345	117					Positive						Negative				NO
4661	117	10	408			Positive	A*02:01(10501)	10	403			Positive	No class II DSA	182	204	YES
5214	117	18	126		337232	Positive	A2(23495)	27	101		192880	Positive	No Class II DSA	253	263	YES
8001	117	50	457			Positive	A*02:01(24988)	100	370			Positive	No Class II DSA	207	273	YES
8035	117	>48	357			Positive	A*02:01(26,333)	>90	369			Positive	No Class II DSA	158	160	YES
8050	117	50	420		35053	Positive	A2(22194)	120	426		77702	Positive	No Class II DSA	40	104	YES
8062	117					NT						NT				YES
8083	117	70	295			Positive	A*02:01(2872)	140	219			Positive	No Class II DSA	191	261	YES
8096	117	5	253.45			Positive						NT		13.1		NO
8111	117	37	298			Positive	A2(20,000) B77(3200)	69	273			Positive	No Class II DSA	225	225	NO

Table 5. Individual Flow crossmatch results and DSA reported for Cell #115 vs. Serum #118

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	118	61	107			Positive	A*11:01(1,639); C*07:02(1,256)	91	288			Positive	DRB5*01:01(9,781); DRB1*15:02(7,240)	75	137	YES
230	118	3.5	0.6			Negative		4.5	34.8			Positive	DR15, DR51			YES
615	118	314	384			Positive Moderate	A*11:01(1364); C*07:02(1930)	336	562			Positive	DRB1*15:02 (7075); DRB5*01:01 (10223)	249	238	YES
774	118	≥ 50	55			Negative		≥ 120	162.5			Positive	DRB1*15:02 (7083.44), DRB5*01 (10224.73)	236	425.5	NO
792	118	52	105			Positive	A11(1934), Cw7(1548)	106	286			Positive	DR51(9438), DR15(6342)	241	282	YES
1160	118	65	171			Positive	A11(719)	70	365			Positive	DR15(4720); DR51(7272)	180	206	YES
1426	118	50	29			Negative		92	253			Positive	DR15(6101), DR51(7991)	347	322	YES
2400	118	18	40			Positive	A*11:01(1116), C*07(1422)	24	135			Positive	DRB1*15*02(6767), DRB5*01:01(10328)	85	26	YES
3135	118	1.2	1651	1,1		Negative						NT		1630		NO
3224	118	70	39			Positive	A11(2457), Cw7(2037)	140	199			Positive	DR15(7342), DR51(9881)	167	166	YES
3753	118	50	90			Positive	A11(1351)	100	274			Positive	DR15(5551), DR51(8025)	208	225	YES
3966	118	20	96			Positive		50	261			Positive		169	258	NO
4345	118					Positive						Positive				NO
4661	118	10	71			Positive	A*11:01(667)	10	181			Positive	DRB1*15:02(3633), DRB5*01:01(6828)	182	204	YES
5214	118	18	38		9151	Positive	A11(2302) C7(2184)	27	86		105157	Positive	DR15(9429) DRB5*01:01(13040)	253	263	YES
8001	118	50	162			Positive	A*11:01(1835) C*07:02(1848)	100	327			Positive	DRB1*15:02(6306) DRB5*01:01(9083)	207	273	YES
8035	118	>48	92			NT	A*11:01(1500), C*07:02(1929) Note:possible 1C and 8C CREG reactivity	>90	267			Positive	DRB1*15:02(9879), DRB5*01:01(12803)	158	160	YES
8050	118	50	117		1118	Positive	A11(1384) Cw7(1312)	120	378		45017	Positive	DR15(6753) DR51(9654)	40	104	YES
8062	118					NT						NT				YES
8083	118	70	154			Positive	A*11:01(1730) C*07:02(1661)	140	298			Positive	DRB1*15:02(6715) DRB5*01:01(9749)	191	261	YES
8096	118	5	5.84			Positive						NT		13.1		NO
8111	118	37	57			Positive	Cw7(1500) A11(1000)	69	216			Positive	DR51(9000) DR15(6000)	225	225	NO

Table 6. Individual Flow crossmatch results and DSA reported for Cell #115 vs. Serum #119

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	119	61	231			Positive	A*02:01(7,605); A*11:01(3,123)	91	171				Positive due to Class I's DSA	75	137	YES
230	119	3.5	6			Positive	A2, A11	4.5	17.3			Positive	No class II DSA			YES
615	119	314	525			Positive	A*02:01(6177); A*11:01(2614)	336	479			Positive	DPB1*01:01 (1098)	249	238	YES
774	119	≥ 50	150			Positive	A2(6808.82), A11(2198.23)	≥ 120	19.5			Negative	No Class II DSA	236	425.5	NO
792	119	52	209			Positive	A2(6028), A11(3525)	106	159			Positive	No class II DSA	241	282	YES
1160	119	65	296			Positive	A2(4675); A11(1789)	70	217			Positive	No class II DSA	180	206	YES
1426	119	50	141			Positive	A11(1422), A2(4821)	92	125			Positive	No class II DSA	347	322	YES
2400	119	18	105			Positive	A*02:01(6549), A*11:01(2873)	24	38			Positive	No Class II DSA. Positive reactivity due to Class I.	85	26	YES
3135	119	1,2	2013	1,3		Positive						NT	1630		NO	
3224	119	70	171			Positive	A2(9010), A11(5022)	140	56			Positive	No class II DSA	167	166	YES
3753	119	50	193			Positive	A2(6118), A11(2726)	100	133			Positive	No class II DSA	208	225	YES
3966	119	20	189			Positive		50	148			Positive		169	258	NO
4345	119					Positive						Positive				NO
4661	119	10	193			Positive	A*02:01(2361), A*11:01(1924)	10	178			Positive	No class II DSA	182	204	YES
5214	119	18	70		38205	Positive	A2(10168) A11(3991)	27	48		21698	Positive	No class II DSA	253	263	YES
8001	119	50	259			Positive	A*02:01(7634) A*11:01(3117) B*15:13(574)	100	195			Positive	DRB1*15:02(6306) DPB1*01:01(550)	207	273	YES
8035	119	>48	215			Positive	A*02:01(6905), A*11:01(1971) B*15:13(879)	>90	209			Positive	No class II DSA	158	160	YES
8050	119	50	231		4086	Positive	A2(5906) A11(2449)	120	144		3146	Positive	No class II DSA	40	104	YES
8062	119					NT						NT				YES
8083	119	70	153			Positive	A*02:01(8030) A*11:01(3183)	140	114			Positive	No class II DSA	191	261	YES
8096	119	5	25.79			Positive						NT	13.1			NO
8111	119	37	126			Positive	A2(5000) A11(1800)	69	92			Positive	No class II DSA	225	225	NO

Table 7. Individual Flow crossmatch results and DSA reported for Cell #115 vs. Serum #120

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	120	61	35			Negative	No Class I DSA	91	24			Negative	No Class II DSA	75	137	YES
230	120	3.5	0.1			Negative	No Class I DSA	4.5	0.2			Negative	No Class II DSA			YES
615	120	314	291			Negative	No Class I DSA	336	269			Negative	No Class II DSA	249	238	YES
774	120	≥ 50	36			Negative	No Class I DSA	≥ 120	37.5			Negative	No Class II DSA	236	425.5	NO
792	120	52	76			NT	B38(785)	106	32			Negative	No Class II DSA	241	282	YES
1160	120	65	89			Borderline	No Class I DSA	70	37			Negative	No Class II DSA	180	206	YES
1426	120	50	-29			Negative	No Class I DSA	92	-15			Negative	No Class II DSA	347	322	YES
2400	120	18	15			Negative	No Class I DSA	24	13			Negative	No Class II DSA	85	26	YES
3135	120	1,2	1668	1,0		Negative						NT		1630		NO
3224	120	70				Borderline	B38(1323)	140				Negative	No Class II DSA	167	166	YES
3753	120	50	41			Negative	No Class I DSA	100	23			Negative	No Class II DSA	208	225	YES
3966	120	20	15			Negative		50	19			Negative		169	258	NO
4345	120					Negative						Negative				NO
4661	120	10	22			Positive	No Class I DSA	10	4			Negative	No class II DSA	182	204	YES
5214	120	18	7		1032	Negative	Weak B38:01(1141) Allele of B38, but not the targeted B38:02. B38:02 not on Single Antigen panel.	27	2		361	Negative	No Class II DSA	253	263	YES
8001	120	50	77			Positive	C*08:01(739)	100	42			Negative	No Class II DSA	207	273	YES
8035	120	>48	73			NT	NONE; possible 5C and 8C CREG reactivity	>90	92			Borderline	NONE; possible 5C and 8C CREG reactivity	158	160	YES
8050	120	50	35		440	Negative	No Class I DSA	120	0		1929	Negative	No Class II DSA	40	104	YES
8062	120					NT						NT				YES
8083	120	70	155			Positive	B38(1100)	140	184			Positive	No Class II DSA	191	261	YES
8096	120	5	6.89			Positive						NT		13.1		NO
8111	120	37	28			Negative	No Class I DSA	69	24			Negative	No Class II DSA	225	225	NO

Table 8. Individual Flow crossmatch results and DSA reported for Cell #116 vs. Serum #117

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	117	61	26			Negative	No Class I DSA	91	355			Positive	DQA1*05:01/ DQB1*03:01(17,838)	73	137	YES
230	117	6.5	0.5			Negative	No Class I DSA	8.5	64.7			Positive	DQ7, DP0402			YES
615	117	292	269			Negative	No Class I DSA	375	655			Positive	DQB1*03:01 DQA1*05:03 (12740); DPB1*04:02(10888)	227	277	YES
774	117	≥ 50	11			Negative	No Class I DSA	≥ 120	255.5			Positive	DQB1*03:01(16846), DPB1*04:02(17049)	240	390.5	NO
792	117	52	88			NT		106	422			Positive	DQ7(14756)	212	283	YES
1160	117	65	40			Negative	No Class I DSA	70	395			Positive	DP4(11406); DQ7(10462)	167	258	YES
1426	117	50	-1.5			Negative	No Class I DSA	92	381			Positive	DP4(15008), DQ8(11209)	302.5	336	YES
2400	117	18	NT			NT		24	188			Positive	DQB1*03:01(12413), DPB1*04:02(15595)	62	60	YES
3135	117	1,2	1924	1,0		Negative						NT		1911		NO
3224	117	70				Negative	No Class I DSA	140	323			Positive	DPB1*05:01(17532), DQ7(18866), DPB1*04:02(17532)	167	166	YES
3753	117	50	37			Negative	No Class I DSA	100	350			Positive	DQ7(13194), DP402(16825)	203	253	YES
3966	117	20	34			Borderline		50	305			Positive		183	329	NO
4345	117					Negative						Negative				NO
4661	117	10	1			Negative	No Class I DSA	10	196			Positive	DQB1*03:01(5652), DPB1*04:02(8413)	197	239	YES
5214	117	18	3		396	Negative	No Class I DSA	27	92		188917	Positive	DQ7(16362), DPB4:02(19599)	255	272	YES
8001	117	50	65			Positive	A*03:01(479)	100	347			Positive	DQB1*03:01(17329) DPB1*04:02(16580)	198	309	YES
8035	117	>48	26			Negative	No Class I DSA	>90	472			Positive	DQ7(16,025), DPB1*04:02(19,934), DP105(15,792)	158	168	YES
8050	117	50	39		430	Negative	No Class I DSA	120	240		21253	Positive	DQ7(13077) DPB1*04:02(16991)	34	176	YES
8062	117					NT						NT				YES
8083	117	70	251			Positive	No Class I DSA	140	376			Positive	DQB1*03:01(16324) DPB1*04:02(15447)	318	398	YES
8096	117	5	5.95			Positive						NT		14.59		NO
8111	117	37	38			Positive	No Class I DSA	69	336			Positive	DQ7(7000) DPB1*04:02(6800)	239	236	NO

Table 9. Individual Flow crossmatch results and DSA reported for Cell #116 vs. Serum #118

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	118	61	169			Positive	A*03:01(3,394); B*42:02(3,240); C*17:01(4,174)	91	297			Positive	DQA1*01:02/ DQB1*06:02(6,382); DRB5*01:01(9,781) DRB1*15:03(6,700)	73	137	YES
230	118	6.5	9.5			Positive	A3, B42	8.5	39.1			Positive	DR15, DQ6			YES
615	118	292	440			Positive Moderate	A*03:01(3718); B*42:01(5289); C*17:01(5334)	375	586			Positive	DRB1*15:03(6533); DRB5*01:01(10223); DQB1*06:02 DQA1*01:02(4841)	227	277	YES
774	118	≥ 50	133			Positive	B42(4519)	≥ 120	214.5			Positive	DRB5*01:01(10225), DRB1*15:03(6754), DQB1*06:02(6537)	240	390.5	NO
792	118	52	184			Positive	B42(4465), Cw17(4349), A3(3244)	106	318			Positive	DR51(9438), DR6(9078), DR15(6342)	212	283	YES
1160	118	65	226			Positive	A3(1633); Cw17(2888); B*42:01(2583)	70	305			Positive	DR15(4505); DR51(7272); DQ6(3356)	167	258	YES
1426	118	50	178.5			Positive	A3(2394), B42(4127), Cw7(3643)	92	308			Positive	DQ6(6916), DQ8(2357), DR15(5554), DR51(7737)	302.5	336	YES
2400	118	18	67			Positive	A*03:01(2916), B*42(4097), C*17(4070)	24	122			Positive	DRB1*15:03(6138), DRB5*01:01(10328), DQB1*06:02(5586)	62	60	YES
3135	118	1,2	2107	1,1		Negative						NT		1911		NO
3224	118	70	79			Positive	A3(4346), B42(6067), Cw17(6360)	140	211			Positive	DR15(7342), DR51(9881), DQ6(7066)	167	166	YES
3753	118	50	156			Positive	A3(2775), B42(4204), Cw17(5570)	100	264			Positive	DR15(5551), DR51(8025), DQ6(6681)	203	253	YES
3966	118	20	153			Positive		50	234			Positive		183	329	NO
4345	118					Positive						Positive				NO
4661	118	10	109			Positive	A*03:01(1146), B*42:01(921), C*17:01(589)	10	205			Positive	DRB1*15:03(3310), DRB5*01:01(6828), DQB1*06:02(3035)	197	239	YES
5214	118	18	52		18986	Positive	A3(4869), C17(7176)	27	73		87274	Positive	DQ6(7485), DR15(8747), DRB5* 01:01(13040)	255	272	YES
8001	118	50	253			Positive	A*03:01(3945) C*17:01(5286)	100	277			Positive	DRB5*01:01(9083) DRB1*15:03(5714) DQB1*06:02(6166)	198	309	YES

Table 9. Individual Flow crossmatch results and DSA reported for Cell #116 vs. Serum #118

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	118	>48	176			Positive	A*03:01(2514), B*42:02(6064), C*17:01(5803)	>90	326			Positive	DRB1*15:03(9219), DRB5*01:01(12,803), DQB1*06:02(7707)	158	168	YES
8050	118	50	193		2478	Positive	A3(2632) B42(4480) Cw17(4107)	120	210		15110	Positive	DR15(6753) DR51(9654) DQ6(7406)	34	176	YES
8062	118					NT						NT				YES
8083	118	70	242			Positive	A*03:01(3731) C*17:01(5489)	140	256			Positive	DRB1*15:03(6590) DRB5*01:01(9749) DQB1*06:02(6972)	318	398	YES
8096	118	5	32.81			Positive						NT		14.59		NO
8111	118	37	87			Positive	B42(4000) C*17(4000) A3(2500)	69	250			Positive	DR51(9000) DQ6(4000) DR15(6000)	239	236	NO

Table 10. Individual Flow crossmatch results and DSA reported for Cell #116 vs. Serum #119

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	119	61	-15			Negative	No Class I DSA	91	99			Positive	DQA1*05:01/ DQB1*03:01(6,417)	73	137	YES
230	119	6.5	0.1			Negative	No Class I DSA	8.5	12.1			Positive	DQ7			YES
615	119	292	246			Negative	No Class I DSA	375	380			Positive	DQB1*03:01 DQA1*05:03(7552)	227	277	YES
774	119	≥ 50	-2			Negative	No Class I DSA	≥ 120	19.5			Negative	DQB1*03:01(3920.45)	240	390.5	NO
792	119	52	44			Negative	No Class I DSA	106	170			Positive	DQ7(4937)	212	283	YES
1160	119	65	10			Negative	No Class I DSA	70	119			Positive	DQ7(3306)	167	258	YES
1426	119	50	-25.5			Negative	No Class I DSA	92	102			Positive	DQ8(3573)	302.5	336	YES
2400	119	18	14			Negative	No Class I DSA	24	31			Positive	DQB1*03:01(3008)	62	60	YES
3135	119	1,2	1825	0,9		Negative						NT		1911		NO
3224	119	70				Negative	No Class I DSA	140	8			Positive	DQ7 6452	167	166	YES
3753	119	50	11			Negative	No Class I DSA	100	89			Negative	DQ7(4962)	203	253	YES
3966	119	20	17			Negative		50	68			Borderline		183	329	NO
4345	119					Negative						Positive				NO
4661	119	10	0			Negative	No class I DSA	10	32			Positive	DQB1*03:01(2058)	197	239	YES
5214	119	18	0		0	Negative	No Class I DSA	27	26		9777	Positive	DQ7(5430)	255	272	YES
8001	119	50	28			Negative	A*30:01(740)	100	138			Positive	DQB1*03:01(5769)	198	309	YES
8035	119	>48	10			Negative	No Class I DSA	>90	119			Positive	DQ7(6560)	158	168	YES
8050	119	50	18		339	Negative	No Class I DSA	120	23		1802	Negative	DQ7(4685)	34	176	YES
8062	119					NT						NT				YES
8083	119	70	264			Positive	No Class I DSA	140	178			Positive	DQB1*03:01(5480)	318	398	YES
8096	119	5	0.13			Negative						NT		14.59		NO
8111	119	37	25			Negative	No Class I DSA	69	72			Positive	DQ7(5000)	239	236	NO

Table 11. Individual Flow crossmatch results and DSA reported for Cell #116 vs. Serum #120

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	120	61	404			Positive	B*41:02(15,949); C*17:01(8,053)	91	350			Positive	No Class II DSA	73	137	YES
230	120	6.5	36.4			Positive	B41	8.5	44			Positive	No Class II DSA			YES
615	120	292	659			Positive	B*41:01(19611); B*42:01(2019); C*17:01(9519)	375	649			Positive	No Class II DSA	227	277	YES
774	120	≥ 50	310			Positive	B41(20935.45), B42(2500.39)	≥ 120	229.5			Positive	No Class II DSA	240	390.5	NO
792	120	52	361			Positive	B41(18956)	106	332			Positive	No DSA Detected	212	283	YES
1160	120	65	415			Positive	B*41:01(17797); B*42:01(1658); Cw17(8550)	70	322			Positive	No Class II DSA	167	258	YES
1426	120	50	346.5			Positive	Cw17(9052), B41(19272), B42(1596)	92	309			Positive	No Class II DSA	302.5	336	YES
2400	120	18	195			Positive	B*41(23585), B*42(3450), C*17(12860)	24	164			Positive	No Class II DSA Positive reactivity due to Class I DSA.	62	60	YES
3135	120	1,2	3929	2,0		Positive						NT	1911			NO
3224	120	70	320			Positive	B41(22211), B42(3420), Cw17(12526)	140	284			Positive	No Class II DSA	167	166	YES
3753	120	50	339			Positive	B41(19493), B42(1812), Cw17(12946)	100	357			Positive	No Class II DSA	203	253	YES
3966	120	20	304			Positive		50	267			Positive		183	329	NO
4345	120					Positive						Negative				NO
4661	120	10	340			Positive	B*41:01(9266), C*17:01(2519)	10	365			Positive	No class II DSA	197	239	YES
5214	120	18	105		167832	Positive	C17(12667)	27	79		112767	Positive	No Class II DSA	255	272	YES
8001	120	50	452			Positive	C*17:01(12600)	100	298			Positive	No Class II DSA	198	309	YES
8035	120	>48	374			Positive	B*41:02(22,774), B*42:02(1365), C*17:01(11,652)	>90	407			Positive	No class II DSA; no BRB1*08:04 bead available	158	168	YES
8050	120	50	407		28242	Positive	B41(20462) B42(1846) Cw17(8452)	120	296		40178	Positive	No Class II DSA	34	176	YES
8062	120					NT						NT				YES
8083	120	70	361			Positive	Possible DSA to B*41:02(no single antigen bead to detect). B42(2925) C*17:01(12159)	140	282			Positive	No Class II DSA	318	398	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #116 vs. Serum #120

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	120	5	216.23			Positive						NT		14.59		NO
8111	120	37	131			Positive	C*17(10,000) B41(20,000) B42(2000)	69	130			Positive	No Class II DSA	239	236	NO

Luminex Single Antigen

Table 12. Summary of Single Antigen results for Serum #117

Class I							
*** Serum 117 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	18	100%	22603	21410	4714	9088	27900
A24	18	100%	2782	3641	1864	1109	6621
A68	18	100%	15756	15189	4542	5397	20870
A69	18	100%	17065	16388	5326	3626	22063
B57	18	100%	15214	13999	4625	2848	19703
B58	18	100%	12858	11839	4053	1708	17002
A23	17	94%	2328	2560	1155	500	4161
A203	4	22%	12285	14175	6549	7301	24830
A2403	4	22%	2103	2899	1995	1109	6282

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Class II							
*** Serum 117 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DPw2	18	100%	16828	15461	4668	5134	21306
DPw3	18	100%	13721	12409	3790	4216	17579
DPw6	18	100%	12993	11791	3451	4364	15813
DQ7	18	100%	13975	13161	4672	3525	20200
DQ8	18	100%	14160	13048	4038	4535	18096
DQ9	18	100%	13889	12798	4283	4048	19000
DR11	18	100%	13619	12595	3393	5023	16702
DR4	18	100%	16935	16455	3422	8293	23400
DP14	17	94%	12299	11298	3291	4041	15875
DP17	17	94%	12479	11490	3681	3525	16728
DP18	17	94%	15137	14044	3917	5163	18663
DP28	17	94%	14522	13536	3823	4819	18100
DP9	17	94%	14010	12764	3946	3836	18074
DQ4	17	94%	3477	3551	1107	1530	5342
DP10	15	83%	12970	12370	2765	4320	16219
DP20	15	83%	14093	13437	2875	5241	17293
DP402	11	61%	16991	15479	4503	5741	19934
DPw4	8	44%	14716	12576	4004	5741	17049
DQA1*03	3	16%	7680	7719	3191	3831	11648
DQA1*06	3	16%	6859	10017	7166	3257	19935
DQA1*05	2	11%	12863	12863	6089	6774	18952
DPA1*01	1	5%	17089	17089	-	17089	17089
DPA1*03	1	5%	11985	11985	-	11985	11985
DPA1*04	1	5%	15283	15283	-	15283	15283
DPw1	1	5%	4715	4715	-	4715	4715
DPw5	1	5%	6589	6589	-	6589	6589
DQ3	1	5%	4535	4535	-	4535	4535
DQA1*04	1	5%	4048	4048	-	4048	4048
DR8	1	5%	603	603	-	603	603

Table 13. Summary of Single Antigen results for Serum #118

Class I							
*** Serum 118 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B60	18	100%	6251	5797	2369	704	9215
B7	18	100%	12177	11147	3975	2350	16058
A3	17	94%	2775	2879	1230	555	4869
B42	17	94%	4480	4382	1620	921	6909
B55	17	94%	3174	3129	1114	719	4835
B61	17	94%	3538	3352	1265	536	5057
B67	17	94%	4713	4486	1637	824	6987
B48	16	88%	5367	5289	1719	894	7809
B13	15	83%	2503	2425	754	527	3660
B27	15	83%	4714	4385	1885	804	6900
B56	15	83%	2747	2679	1037	547	4532
Cw17	14	77%	4831	4830	1573	1089	7176
B81	13	72%	10509	11063	2009	7485	14541
Cw18	12	66%	2688	2850	596	1931	4077
Cw6	11	61%	2580	2732	602	1793	3850
A11	10	55%	1826	1780	545	923	2639
B54	10	55%	1761	1848	504	900	2763
B73	10	55%	1969	1946	473	990	2751
B82	10	55%	2000	1981	669	690	3145
A80	9	50%	1770	1735	475	525	2424
A36	8	44%	1190	1250	596	510	2237
Cw7	8	44%	1889	1839	352	1312	2400
A1	7	38%	1400	1373	618	510	2327
B2708	7	38%	3856	4196	2693	937	8391
B47	7	38%	1181	1158	374	552	1615
B2705	6	33%	2636	3196	2265	759	6473
Cw5	6	33%	1718	1740	398	1222	2300
B8101	5	27%	3754	6474	5150	1129	13090
A1101	4	22%	733	998	500	667	1860
A1102	3	16%	1509	1504	780	547	2457
B703	3	16%	1856	2031	819	1127	3110
Cw15	3	16%	1949	1835	275	1457	2100

Class II							
*** Serum 118 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ6	18	100%	9529	8260	3187	1446	12800
DR15	18	100%	6652	6422	2203	1683	9539
DR16	18	100%	3761	3672	1253	1157	5590
DR51	18	100%	9702	9276	2611	3608	13600
DQ8	17	94%	3438	3072	1344	511	5099
DQ9	16	88%	3159	2967	1156	670	4594
DP401	4	22%	1202	1120	194	791	1289
DQA1*01	3	16%	10072	8508	4483	2405	13047
DQA1*03	3	16%	3085	2968	1868	625	5196
DPA1*04	1	5%	1087	1087	-	1087	1087
DQ3	1	5%	728	728	-	728	728
DQA1*02	1	5%	728	728	-	728	728
DQA1*04	1	5%	670	670	-	670	670
DR3	1	5%	3438	3438	-	3438	3438

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 14. Summary of Single Antigen results for Serum #119

Class I							
*** Serum 119 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	18	100%	6375	6237	2154	1639	10122
A25	18	100%	13547	12185	4045	2680	17775
A26	18	100%	7855	7355	2440	1533	10828
A32	18	100%	5962	5286	2031	649	7928
A34	18	100%	3416	3252	1281	629	5186
A43	18	100%	4751	4543	1664	992	7083
B57	18	100%	18251	16520	4720	3854	21300
B58	18	100%	15165	13755	4267	2275	18633
A29	16	88%	2456	2454	774	1017	3790
A31	16	88%	2372	2352	811	831	3969
A33	16	88%	2632	2684	872	1072	4291
A68	16	88%	2136	2314	945	560	3861
A11	15	83%	2726	2872	1076	643	4554
A74	15	83%	1929	1887	622	640	3031
A66	14	77%	6635	6830	2111	2034	10500
A69	14	77%	1880	1968	820	573	3452
B63	14	77%	2435	2306	722	738	3400
A6601	5	27%	4599	6457	3946	2034	11899
A6602	5	27%	1635	2334	1500	629	4259
A1101	4	22%	2871	2594	1388	643	3991
A1102	4	22%	3297	3131	2073	607	5325
A203	4	22%	2366	3615	3100	860	8871
B76	1	5%	991	991	-	991	991
B77	1	5%	879	879	-	879	879

Class II							
*** Serum 119 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ7	18	100%	4811	4552	1752	692	7100
DQ8	18	100%	4422	4258	1467	965	6212
DQ9	18	100%	4559	4161	1589	674	6400
DR7	18	100%	5497	5170	1794	1254	8417
DR9	15	83%	2208	2257	688	673	3400
DR12	10	55%	1524	1456	319	725	1850
DR52	9	50%	2046	2121	533	1257	3200
DQA1*03	3	16%	5138	3997	2359	712	6142
DQA1*05	3	16%	5585	4773	3055	692	8043
DQA1*06	3	16%	5753	4857	3202	566	8254
DQA1*02	2	11%	2255	2255	1290	965	3545
DPA1*03	1	5%	965	965	-	965	965
DPw5	1	5%	734	734	-	734	734
DQ3	1	5%	965	965	-	965	965
DQA1*04	1	5%	663	663	-	663	663

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

Table 15. Summary of Single Antigen results for Serum #120

Class I							
*** Serum 120 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B13	18	100%	19630	18269	5487	2930	23900
B41	18	100%	20606	18881	5199	4457	23700
B44	18	100%	16931	15742	4233	4519	20300
B45	18	100%	18810	17072	4948	3807	22015
B47	18	100%	18245	17053	4045	4781	21159
B48	18	100%	19080	16655	6216	753	21637
B49	18	100%	20033	18209	5560	3307	23900
B50	18	100%	19928	18119	5022	4225	23000
B4005	1	5%	21809	21809	-	21809	21809
B60	18	100%	23302	22010	5326	6672	28288
B61	18	100%	23058	21395	5291	6283	28100
B7	18	100%	20799	19204	4609	6281	24100
B73	18	100%	19061	16942	4823	3967	21827
Cw17	18	100%	11151	9945	3664	1075	14200
Cw2	18	100%	11954	10279	3859	1140	14212
B27	15	83%	18119	16893	4609	5535	22100
B62	14	77%	2474	2411	804	574	3400
B67	14	77%	2687	2469	745	501	3292
B81	14	77%	20270	19384	4533	4564	24000
B42	13	72%	2500	2522	676	1564	3470
A6602	11	61%	14127	13444	4231	4603	17990
B55	9	50%	1971	1888	311	1414	2259
A66	8	44%	12294	12151	4091	4603	17892
B2708	7	38%	20225	16551	5268	7351	21772
B72	7	38%	2013	1810	356	1128	2100
Cw9	7	38%	1812	1786	387	1280	2328
B2705	6	33%	15026	14127	4814	6422	19588
B8101	5	27%	12438	13942	6849	4564	22049
Cw10	5	27%	1541	1617	327	1149	2142
B38	4	22%	1274	1226	167	959	1400
B39	4	22%	1426	1394	177	1125	1600
B703	3	16%	7898	7487	2661	4043	10522

Class II							
*** Serum 120 ***							
18 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
NEG	17	94%	1300	1300	-	1300	1300
DP11	1	6%	1300	1300	-	1300	1300

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 16a. Individual laboratory results for Serum #117 - class I by One Lambda Single Antigen

**** Serum 117 ****											
Ctr	A2	A24	A68	A69	B57	B58	A23	A203	A2403	Other	Manufacturer
230	25807	6200	19831	22063	18085	15252	3962				One Lambda
774	23292	2792	15991	16908	15849	13470	2328				One Lambda
792	22320	4756	16638	17221	14013	11696	3077				One Lambda
1160	19738	2772	11862	13632	10099	8197	1630				One Lambda
1426	22688	1959	14111	16694	15184	13017	1861				One Lambda
2400	23448	5212	17370	20131	14235	11987	3360				One Lambda
3224	24959	6621	20567	21317	18205	15050	4084	24830	6282		One Lambda
3753	21434	2605	14848	16747	14253	12335	2049				One Lambda
5214	23399	6271	20425	21637	19703	17002	4161				One Lambda
8001	24988	5848	20870	21036	17056	14365	3933				One Lambda
8035	25100	2018	15521	18882	17202	14913	1945				One Lambda,
8050	22194	2342	14505	14659	15243	12698	1999				One Lambda
8062	27900	4000	19100	21600	18500	15800	3100				One Lambda
8083	22517	5780	18883	20062	16955	14553	3605				One Lambda
8096	19370	1425	11249	14127	12003	10359					One Lambda
Avg	23277	4040	16785	18448	15772	13380	2935	-	-		
Std											
Dev.S	2254	1849	3127	2925	2592	2275	937	-	-		
MFI											
%CV	10%	46%	19%	16%	16%	17%	32%	-	-		

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 16b. Individual laboratory results for Serum #117 - class I by Lifecodes-Immucor Single Antigen

**** Serum 117 ****											
Ctr	A2	A24	A68	A69	B57	B58	A23	A203	A2403	Other	Manufacturer
4661	12568	1939	7672	7120	5977	4699	930	10940	2121		Lifecodes
8029	14587	1904	8567	7539	6573	6005	1011	13630	2085		Lifecodes
8103	9088	1109	5397	3626	2848	1708	500	7301	1109		Lifecodes
Avg	12081	1651	7212	6095	5133	4137	814	10624	1772		
Std											
Dev.S	2782	469	1634	2148	2001	2203	275	3176	574		
MFI											
%CV	23%	28%	23%	35%	39%	53%	34%	30%	32%		

Table 17a. Individual laboratory results for Serum #118 - class I by One Lambda Single Antigen

**** Serum 118 ****																						
Ctr	B60	B7	A3	B42	B55	B61	B67	B48	B13	B27	B2708	B2705	B56	Cw17	B81	B8101	Cw18	Cw6	A11	A1101	A1102	B54
230	8769	15862	4672	6309	4273	4707	6216	7809		6709					14541							
774	6188	12149	2739	4519	3113	3759	4729	5003	2694		5427	4033	2676		10478							
792	6314	11682	3244	4465	3021	3538	4291	5369	2483	5223			2601	4349	10509		2596	2334	1934			1579
1160	4512	8209	1633	2583	1897	2533	2685	3704	1703	3545			1510	2888	7485				923			900
1426	4946	10710	2496	4230	3171	2732	4502	4117	2155	4228			2693	3907	9455		1931	1793	1717			1677
2400	6635	11445	2922	4113	3176	3013	4088	5760	2503	4193			2750	4223	10757		2265	2229				
3224	8210	14472	4346	6067	4282	5057	5959	7093	3660		7221	5520	3734	6360		13090	3595	3526		1860	2457	2340
3753	5398	12204	2775	4204	3109	2417	4535	3720	1772	4714			2648	5570	9756		2707	2580	1352			1518
5214	9215	16058	4869	6909	4835	5034	6987	7564	3038		8391	6473	4532	7176	14528		4077	3850	2639			2763
8001	7143	13820	3945	5346	3953	4244	5394	6201	2974	6416			3386	5286		12290	2976	2756	2464			2045
8035	6619	13626	2514	4988	3777	3642	5533	5365	2010	5240	3856		3236	5803	11606		2605	2525	1151	793	1509	1845
8050	6166	12563	2632	4480	3174	3438	4713	4900	2702	4805			2747	4107	10489		2669	2204	1384			1513
8062	8100	14900	3700	5600	4000	4600	5600	7100	3500	6900			3400	7000	13400		3500	3400	2000			2300
8083	7240	12379	3731	5409	3568	4095	5449	6033	2646	6138			3084	5489	11755		3037	2862	2244			
8096	4851	10549		3352	2360	2759	3843	3992	2020	4217				4375	9069		2252					
Avg	6687	12709	3301	4838	3447	3705	4968	5582	2561	5194	6224	5342	3000	5118	11064	12690	2851	2733	1781	1327	1983	1848
Std																						
Dev.S	1440	2128	937	1137	766	898	1069	1380	599	1111	1994	1230	712	1277	2091	566	622	631	574	754	670	532
MFI																						
%CV	22%	17%	28%	24%	22%	24%	22%	25%	23%	21%	32%	23%	24%	25%	19%	4%	22%	23%	32%	57%	34%	29%

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 17b. Individual laboratory results for Serum #118 - class I by Lifecodes-Immucor Single Antigen

**** Serum 118 ****																						
Ctr	B60	B7	A3	B42	B55	B61	B67	B48	B13	B27	B2708	B2705	B56	Cw17	B81	B8101	Cw18	Cw6	A11	A1101	A1102	B54
4661	1448	3610	1146	921	719	536	824			1708	1708	1154	641			2107				667	547	
8029	1892	4059	1039	1007	770	881	930	894	527	804	1836	1239	547	1089		3754				672		
8103	704	2350	555							937	937	759				1129						
Avg	1348	3340	913	964	745	709	877	-	-	1150	1494	1051	594	-	-	2330	-	-	-	670	-	-
Std																						
Dev.S	600	886	315	61	36	244	75	-	-	488	486	256	66	-	-	1327	-	-	-	4	-	-
MFI																						
%CV	45%	27%	34%	6%	5%	34%	9%	-	-	42%	33%	24%	11%	-	-	57%	-	-	-	1%	-	-

Table 17a. Individual laboratory results for Serum #118 - class I by One Lambda Single Antigen, Cont.

**** Serum 118 ****												
Ctr	B73	B82	A80	A36	Cw7	A1	B47	Cw5	B703	Cw15	Other	Manufacturer
230												One Lambda
774												One Lambda
792		1800			1548							One Lambda
1160	990	1087		713		736	756					One Lambda
1426	1681	2021	1896		1457							One Lambda
2400												One Lambda
3224	2346		1770	1784	2037	1890	1615	1899		1949	A24,A32,Cw2,A2403 >	One Lambda
3753	1618	1882	1758									One Lambda
5214	2751	3145	2424	2237	2184	2327		2131				One Lambda
8001	2034		1924	1783	1848	1792	1349	1536		1457	A6602,B8201	One Lambda
8035	1903	2384	1893	1079	1929	958	1181	1222				One Lambda,
8050	1638	1978	1731		1312		1055	1352				One Lambda
8062	2400	2600	1700	1300	2400	1400	1600	2300		2100	Cw2	One Lambda
8083	2104	2232										One Lambda
8096												One Lambda
Avg	1947	2125	1887	1483	1839	1517	1259	1740	-	1835		
Std												
Dev.S	498	572	233	555	376	601	332	436	-	336		
MFI												
%CV	26%	27%	12%	37%	20%	40%	26%	25%	-	18%		

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 17b. Individual laboratory results for Serum #118 - class I by Lifecodes-Immucor Single Antigen

**** Serum 118 ****												
Ctr	B73	B82	A80	A36	Cw7	A1	B47	Cw5	B703	Cw15	Other	Manufacturer
4661		690		510					1856			Lifecodes
8029			525	596		510	552		3110		Bw6	Lifecodes
8103									1127		B40	Lifecodes
Avg	-	-	-	553	-	-	-	-	2031	-		
Std												
Dev.S	-	-	-	61	-	-	-	-	1003	-		
MFI												
%CV	-	-	-	11%	-	-	-	-	49%	-		

Table 18a. Individual laboratory results for Serum #119 - class I by One Lambda Single Antigen

**** Serum 119 ****																								
Ctr	A2	A25	A26	A32	A34	A43	B57	B58	A29	A31	A33	A68	A11	A74	A66	A69	B63	A6601	A6602	A1101	A1102	A203	Other	Manufacturer
230	8859	15905	10210	7549	4852	6755	19105	16500					4281		7541									One Lambda
774	6809	14386	8566	6338	3673	4899	19210	15910	2770	2430	2988	2300	3457		9081		2848							One Lambda
792	6028	11371	6928	4836	3354	4605	15992	12751	2443	2292	2741	2560	3525	1830	7580	1914	1724							One Lambda
1160	4795	8932	5659	3628	2685	3654	13977	11574	1934	1858	2194	1972	2489	1440	5965	1561	1168							One Lambda
1426	4878	12028	6775	4986	2568	3572	17358	14590	1841	1778	1993	1545	2119	1404	4700	1363	2310							One Lambda
2400	6631	12142	7561	5244	3663	5636	17495	14408	2639	2696	2832	2633	3392	2098	5824	2260								One Lambda
3224	9010	15660	9895	7062	4856	6694	20159	16005	3748	3518	4291	3861		2837		3216	2681	10404	3995	3818	5022	8871		One Lambda
3753	6118	13299	8148	6012	3138	4421	18584	16044	2180	2314	2461	1961	2726	1929	6044	1846	2398							One Lambda
5214	10122	17775	10828	7928	5186	7083	20797	18633	3790	3969	4111	3804		3031		3452	2942	11899	4259	3991	5325			One Lambda
8001	7966	13795	8485	5911	4159	5506	18770	15387	3131	2967	3452	3276	3962	2371	8196	2600	2189							One Lambda
8035	6725	15552	8997	7113	3478	4896	20462	17546	2468	2506	2523	1858	2591	1985	6233	1758	3128						B76,B77	One Lambda
8050	5906	14886	7334	6179	2880	3889	18412	14978	2205	2140	2335	1693	2449	1652	5230	1148	2471							One Lambda
8062	7600	15200	9400	7100	4300	5900	21300	18300	3000	2900	3300	2800	3800	2300	10500	2400	3400							One Lambda
8083	8063	14056	8859	6436	4433	5844	18090	15351	3099	2932	3416	3619	4554	2285	9667	2652	2584							One Lambda
8096	3831	10899	6060	4278	2159	2889	17038	14026	1771	1372	1880		1639	1491	7037		1708							One Lambda
Avg	6889	13726	8247	6040	3692	5083	18450	15467	2644	2548	2894	2606	3153	2050	7200	2181	2427	11152	4127	3905	5174	8871		
Std																								
Dev.S	1733	2305	1520	1241	919	1266	1927	1909	651	690	743	814	885	511	1770	715	622	1057	187	122	214	-		
MFI																								
%CV	25%	17%	18%	21%	25%	25%	10%	12%	25%	27%	26%	31%	28%	25%	25%	33%	26%	9%	5%	3%	4%	-		

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 18b. Individual laboratory results for Serum #119 - class I by Lifecodes-Immucor Single Antigen

**** Serum 119 ****																								
Ctr	A2	A25	A26	A32	A34	A43	B57	B58	A29	A31	A33	A68	A11	A74	A66	A69	B63	A6601	A6602	A1101	A1102	A203	Other	Manufacturer
4661	4134	6289	4060	2404	1468	2475	8746	6304	1228	1129	1358	1443		1012		822		4599	1635	1924	1571	2597		Lifecodes
8029	3159	4475	3101	1500	1070	2064	8017	7009	1017	831	1072	1139	1461	640		573	738	3353	1156			2134		Lifecodes
8103	1639	2680	1533	649	629	992	3854	2275				560	643		2034			2034	629	643	607	860		Lifecodes
Avg	2977	4481	2898	1518	1056	1844	6872	5196	1123	980	1215	1047	1052	826	-	698	-	3329	1140	1284	1089	1864	-	
Std																								
Dev.S	1257	1805	1276	878	420	766	2639	2554	149	211	202	449	578	263	-	176	-	1283	503	906	682	900	-	
MFI																								
%CV	42%	40%	44%	58%	40%	42%	38%	49%	13%	22%	17%	43%	55%	32%	-	25%	-	39%	44%	71%	63%	48%	-	

Table 19a. Individual laboratory results for Serum #120 - class I by One Lambda Single Antigen

**** Serum 120 ****																								
Ctr	B13	B41	B44	B45	B47	B48	B49	B50	B60	B61	B7	B73	Cw17	Cw2	B27	B2705	B2708	B62	B67	B81	B8101	B42	A66	A6602
230	21010	22648	18094	20819	19625	20585	21770	22078	25788	24813	21829	19557	12635	13152	19400					22086				17432
774	22172	20935	18239	19452	19212	19577	20855	20224	24116	24005	21985	19042	10650	11796		18084	20225	2660	2532	20435		2500	13790	
792	19050	18956	16233	16759	16770	16819	18532	17556	22076	21324	18076	15386	9344	9747	16748			2011	1875	17409		1921	12952	
1160	18143	17797	13760	14883	15743	16550	16405	16061	22997	21848	18160	14556	8550	9062	16896					17931				12235
1426	18597	19401	14199	16760	16318	17946	19629	19134	25110	23050	20165	17670	9342	9951	17175			1890	2252	19013		1725	10513	
2400	22329	23617	19535	22015	21159	21637	22840	22546	24565	23921	22930	21207	13051	14212	20434			3115	3119	22636		3470	17892	
3224	21529	22211	19902	20104	19414	19727	21762	21239	24032	24326	21503	19975	12526	13248		18189	20225	3312	3116		21446	3420		16867
3753	18952	19493	15416	17423	16063	17622	17548	17703	21916	20192	20485	18989	12946	12112	18805			1951	2326	20104		1812		14127
5214	21173	21670	17628	20409	20204	21585	21704	21344	23311	23066	22308	21413	12667	13693		19588	21273	3369	3292	21739		3034		17990
8001	22089	21954	19891	20172	19978	19995	21329	20940	23292	24462	21375	19473	12600	12641	20665			3082	2970		22049	2875		17090
8035	21972	23067	17993	21129	20201	20701	22501	22461	28288	26190	23208	21827	11652	12221	20159		21772	2287	2842	22825		2302		13522
8050	18297	20462	15899	18612	17838	18582	20147	20244	24439	23408	20741	19080	8452	9559	17828			2007	2245	19327		1846	11635	
8062	23900	23700	20300	21400	21000	21400	23900	23000	27900	28100	24100	20400	14200	13900	22100			3400	3100	24000		3400		16600
8083	20210	20750	18061	19007	18652	20149	19918	19632	22753	22585	20856	19249	12159	12946	19278			2716	2900	20980		2925	17185	
8096	18938	18869	15949	17361	16735	16513	18909	18135	21892	21828	18532	14840	10140	9347	18119			1385	1502	18334		1564	8642	
Avg	20557	21035	17407	19087	18594	19293	20517	20153	24165	23541	21084	18844	11394	11839	18967	18620	20874	2553	2621	20525	21748	2523	13230	15733
Std Dev.S	1796	1853	2081	2065	1864	1829	2064	2087	1967	1974	1805	2295	1830	1816	1679	840	776	672	548	2063	426	704	3385	2123
MFI %CV	9%	9%	12%	11%	10%	9%	10%	10%	8%	8%	9%	12%	16%	15%	9%	5%	4%	26%	21%	10%	2%	28%	26%	13%

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 19b. Individual laboratory results for Serum #120 - class I by Lifecodes-Immucor Single Antigen

**** Serum 120 ****																								
Ctr	B13	B41	B44	B45	B47	B48	B49	B50	B60	B61	B7	B73	Cw17	Cw2	B27	B2705	B2708	B62	B67	B81	B8101	B42	A66	A6602
4661	7560	9266	8843	9046	10953	2395	8953	9982	11616	11096	11940	10048	2519	2773	12906	11968	12906				9216			9215
8029	10007	10613	8906	8147	12316	7265	7763	9649	15422	14628	11205	8293	4515	3536	5535	10514	12107	574	501		12438			8208
8103	2930	4457	4519	3807	4781	753	3307	4225	6672	6283	6281	3967	1075	1140	7351	6422	7351			4564	4564		4603	4603
Avg	6832	8112	7423	7000	9350	3471	6674	7952	11237	10669	9809	7436	2703	2483	8597	9635	10788	-	-	-	8739	-	-	7342
Std Dev.S	3594	3236	2515	2802	4015	3387	2976	3232	4387	4189	3077	3130	1727	1224	3840	2876	3003	-	-	-	3959	-	-	2425
MFI %CV	53%	40%	34%	40%	43%	98%	45%	41%	39%	39%	31%	42%	64%	49%	45%	30%	28%	-	-	-	45%	-	-	33%

Table 20a. Individual laboratory results for Serum #120 - class I by One Lambda Single Antigen, cont.

**** Serum 120 ****								
Ctr	B55	B72	Cw9	Cw10	B38	B39	Other	Manufacturer
230								One Lambda
774								One Lambda
792								One Lambda
1160								One Lambda
1426	1511		1280					One Lambda
2400	2259	2063						One Lambda
3224	2158	2033	1960	1755	1323	1491		One Lambda
3753	1518							One Lambda
5214	2114	2013	2229					One Lambda
8001	1971	1934	2328	2142	1225	1361		One Lambda
8035	1849	1401	1812	1541	959	1125	B4005	One Lambda,
8050	1414	1128	1298	1149				One Lambda
8062	2200	2100	1600	1500	1400	1600	Cw15	One Lambda
8083								One Lambda
8096								One Lambda
Avg	1888	1810	1787	1617	1227	1394		
Std								
Dev.S	330	384	418	365	192	204		
MFI								
%CV	17%	21%	23%	23%	16%	15%		

Blue = DSA against cell #115 only

Gold = DSA against cell #116 only

Green = DSA against cell #115 and #116

Table 20b. Individual laboratory results for Serum #120 - class I by Lifecodes-Immucor Single Antigen, cont.

**** Serum 120 ****								
Ctr	B55	B72	Cw9	Cw10	B38	B39	Other	Manufacturer
4661							B703	Lifecodes
8029							B703	Lifecodes
8103							B40,B703	Lifecodes
Avg	-	-	-	-	-	-		
Std								
Dev.S	-	-	-	-	-	-		
MFI								
%CV	-	-	-	-	-	-		

Table 21a. Individual laboratory results for Serum #117 - class II by One Lambda Single Antigen

**** Serum 117 ****																							
Ctr	DPw2	DPw3	DPw6	DQ7	DQ8	DQ9	DR11	DR4	DP14	DP17	DP18	DP28	DP9	DQ4	DP10	DP20	DP402	DPw4	DQA1*03	DQA1*06	Other	Manufacturer	
230	18899	15052	14694	15697	15725	14972	15136	18968	13386	13832	16279	15474	15124	4598	13398	14839	18227				DPA1*03	One Lambda	
774	16804	14657	14228	17075	16177	16287	14003	16974	13042	13808	16466	15891	14944	3477	12970	14652		17049				One Lambda	
792	15193	11993	12189	14756	15268	14393	12610	17196	10670	10914	13847	13173	11988	3924	11173	12040			14292			One Lambda	
1160	11581	9742	10011	10462	10449	9837	10227	14488	8843	9050	10629	10525	9945	2614	9169	9665	11406					One Lambda	
1426	16080	11532	10691	12482	11350	12512	11126	15022	11000	10771	13382	12271	12239	2027	11873	12279				15139		One Lambda	
2400	16696	12471	11901	12470	12882	12381	13459	16896	11222	11446	13299	12726	11704	3576	11093	12653				15614		One Lambda	
3224	18477	15879	15230	18866	18096	17802	15770	18944	13509	14255	17252	17466	16091	5342	13819	14986	17532					One Lambda	
3753	17932	13832	12680	13194	12289	13385	12675	16572	12898	13006	14924	13837	14341	2972	13343	13773	16825					One Lambda	
5214	21066	17579	15813	16362	16003	16569	16702	20232	15875	16728	18663	17835	18074	5095	16219	17293	19599					One Lambda	
8001	17896	14602	13536	17329	17475	16862	15090	17555	12838	13462	16565	16609	14747	4351	13251	14445	16580					One Lambda	
8035	21306	16446	15393	16025	15971	15000	16648	19715	14259	14702	18381	16735	16500	3200	14900	16546	19934			11648	19935	DPA1*01,DPA1*04, DQA1*05	One Lambda
8050	18384	13700	13305	13077	13051	12505	13779	16691	12299	12479	15229	14522	14010	2683	12411	14093	16991					One Lambda	
8062	19900	16500	14700	20200	17800	19000	16000	23400	14600	14900	18100	18100	17100	5300	15500	16000	18800					One Lambda	
8083	16851	13741	13507	16324	15691	15308	14176	17356	12142	12434	15137	15098	13768	4128	12124	13055		15447				One Lambda	
8096	7956	5711	5346	6859	7680	6621	6029	12465	4453	4699	6761	6680	6444		4320	5241		7255	7680	6859		DPw1,DPw5, DQA1*05	One Lambda
Avg	17001	13562	12882	14745	14394	14229	13562	17498	12069	12432	14994	14463	13801	3806	12371	13437	17322	14133	9664	13397			
Std																							
Dev.S	3467	3013	2688	3407	2996	3182	2818	2595	2726	2873	3159	3080	2989	1051	2862	2976	2524	3486	2806	9246			
MFI																							
%CV	20%	22%	21%	23%	21%	22%	21%	15%	23%	23%	21%	21%	22%	28%	23%	22%	15%	25%	29%	69%			

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

Table 21b. Individual laboratory results for Serum #117 - class II by Lifecodes-Immucor Single Antigen

**** Serum 117 ****																						
Ctr	DPw2	DPw3	DPw6	DQ7	DQ8	DQ9	DR11	DR4	DP14	DP17	DP18	DP28	DP9	DQ4	DP10	DP20	DP402	DPw4	DQA1*03	DQA1*06	Other	Manufacturer
4661	8825	6648	6865	5769	6871	6004	8530	11030	6990	5321	8677	8367	6147	2397			8643					Lifecodes
8029	9326	9061	7793	6437	7566	6881	9730	14409						3156				10077			DR8	Lifecodes
8103	5134	4216	4364	3525	4535	4048	5023	8293	4041	3525	5163	4819	3836	1530			5741	5741	3831	3257	DQ3,DQA1*04	Lifecodes
Avg	7762	6642	6341	5244	6324	5644	7761	11244	5516	4423	6920	6593	4992	2361	-	-	7192	7909	-	-		
Std																						
Dev.S	2289	2423	1774	1525	1588	1450	2446	3064	2085	1270	2485	2509	1634	814	-	-	2052	3066	-	-		
MFI																						
%CV	29%	36%	28%	29%	25%	26%	32%	27%	38%	29%	36%	38%	33%	34%	-	-	29%	39%	-	-		

Table 22a. Individual laboratory results for Serum #118 - class II by One Lambda Single Antigen

**** Serum 118 ****											
Ctr	DQ6	DR15	DR16	DR51	DQ8	DQ9	DP401	DQA1*01	DQA1*03	Other	
230	10207	9252	5584	11426							One Lambda
774	11182	7208	3974	10225	4510	3969					One Lambda
792	9078	6342	3562	9438	3666	3237					One Lambda
1160	6763	4808	2814	7272	2583	2308					One Lambda
1426	7043	5676	2903	7862	2214	2283					One Lambda
2400	7024	6550	4100	9823	3628	3233					One Lambda
3224	11681	7342	4423	9881	5099	4594	1203				One Lambda
3753	6681	5551	3026	8025	1945	1993					One Lambda
5214	9980	8798	5590	12318	3290	3361					One Lambda
8001	9987	6306	3395	9083	4440	3858					One Lambda
8035	10099	9539	5170	12606	3494	2887	1289	13047	5196	DPA1*04	One Lambda
8050	7406	6753	3624	9654	2319	1881					One Lambda
8062	12800	9400	5100	13600	3800	4500	1200				One Lambda
8083	11560	6797	3897	9749	5040	4532					One Lambda
8096	10072	7668	4214	11465	3438	3085		10072	3085	DR3	One Lambda
Avg	9438	7199	4092	10162	3533	3266	1231	11560	4141		
Std Dev.S	2009	1474	926	1818	1012	934	51	2104	1493		
MFI											
%CV	21%	20%	23%	18%	29%	29%	4%	18%	36%		

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

Table 22b. Individual laboratory results for Serum #118 - class II by Lifecodes-Immucor Single Antigen

**** Serum 118 ****											
Ctr	DQ6	DR15	DR16	DR51	DQ8	DQ9	DP401	DQA1*01	DQA1*03	Other	
4661	3280	3850	2117	6828	1533	1091	791				Lifecodes
8029	1446	1683	1157	3608	511						Lifecodes
8103	2405	2081	1458	4121	728	670		2405	625	DQ3,DQA1*02,DQA1*04	Lifecodes
Avg	2377	2538	1577	4852	924	881	-	-	-		
Std Dev.S	917	1154	491	1730	538	298	-	-	-		
MFI											
%CV	39%	45%	31%	36%	58%	34%	-	-	-		

Table 23a. Individual laboratory results for Serum #119 - #120 - class II by One Lambda Single Antigen

Ctr	**** Serum 119 ****											**** Serum 120 ****		Manufacturer
	DQ7	DQ8	DQ9	DR7	DR9	DR12	DR52	DQA1*03	DQA1*05	DQA1*06	Other	DP11	Other	
230	4228	3985	3973	5877								NEG		One Lambda
774	4449	4124	3694	3852	3242							NEG		One Lambda
792	4937	4764	4628	5048	1845							NEG		One Lambda
1160	3451	3303	3201	3451	1373	725						NEG		One Lambda
1426	4679	3880	4490	5487	2479	1547	2046					NEG		One Lambda
2400	4425	3784	3676	5165								NEG		One Lambda
3224	6452	5982	5897	5899	2446	1579						NEG		One Lambda
3753	4962	4379	4738	5594	2156	1462	2226					NEG		One Lambda
5214	5430	4853	5209	7048	2653							NEG		One Lambda
8001	5769	5327	5132	5462	2018	1501	1798					NEG		One Lambda
8035	6560	6212	5951	8417	3091	1850	2665	6142	8043	8254	DPw5	NEG		One Lambda
8050	4685	4464	4203	6475	2119	1617	1968					NEG		One Lambda
8062	7100	5800	6400	7300	3400	1800	3200					1300		One Lambda
8083	5480	5451	5135	5507	2208		2248					NEG		One Lambda
8096	5753	5568	5138	6042	2445	1417	1689	5138	5585	5753	DQA1*02	NEG		One Lambda
Avg	5224	4792	4764	5775	2421	1500	2230	5640	6814	7004		-		
Std Dev.S	986	895	918	1248	573	325	495	710	1738	1768		-		
MFI %CV	19%	19%	19%	22%	24%	22%	22%	13%	26%	25%		-		

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

Table 23b. Individual laboratory results for Serum #119 - #120 - class II by Lifecodes-Immucor Single Antigen

Ctr	**** Serum 119 ****											**** Serum 120 ****		Manufacturer
	DQ7	DQ8	DQ9	DR7	DR9	DR12	DR52	DQA1*03	DQA1*05	DQA1*06	Other	DP11	Other	
4661	2058	2710	1963	3597	1708	1063	1257					NEG		Lifecodes
8029	843	1097	811	1591	673							NEG		Lifecodes
8103	692	965	674	1254				712	692	566	DQ3,DPA1*03,DQA1*02,DQA1*04	NEG		Lifecodes
Avg	1198	1591	1149	2147	1191	-	-	-	-	-		-		
Std Dev.S	749	972	708	1267	732	-	-	-	-	-		-		
MFI %CV	63%	61%	62%	59%	61%	-	-	-	-	-		-		

Paper Challenge

Table 24. Individual Virtual crossmatch results for Serum #119 vs Donor# V1

Donor #V1 HLA A*11:01-A*66:01-B*41:02-B*44:02:01G-C*05:01-C*17:01:01G-DRB1*08:01-DRB1*13:03-DRB3*01:01-DQA1*04:01:01G-DQA1*05:01:01G-DQB1*03:01-DQB1*04:02-DPA1*01:03:01G-DPB1*04:01-DPB1*06:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	119	98	Positive	A1101 (3123) A6601 (8793)	Positive	DR52 (1872)	Unacceptable	DSA: DQA1*05:05/ DQB1*03:01(6,417MFI)
230	119	93	Positive	A11 (3687) A66 (11296)	Positive	DQ7 (5129)	Unacceptable	
774	119	94	Positive	A1101 (2198) A6601 (9081)	Positive	DQ7 (3920)	Unacceptable	
792	119	95	Positive	A11 (2548) A66 (7580)	Positive	DQ7 (4879)	Unacceptable	
1426	119	99%	Positive	A11 (1858) A66 (4414)	Positive	DR52 (1721) DQ8 (3573)	Unacceptable	
1461	119		Positive	A11 (651) A66 (1820)	Positive	DQ7 (558)	Unacceptable	
2400	119	94%	Positive	A11 (2873) A66 (8252)	Positive	DR52 (1273) DQ7 (3869)	Unacceptable	
3224	119	97	Positive	A1101 (3818) A6601 (10404)	Positive	DR52 (1810) DQ7 (6452)	Unacceptable	
3753	119	94.82	Positive	A11 (2726) A66 (6044)	Positive	DQ7 (4962)	Unacceptable	The patient also displays DSA to DRB3*01:01 (2286 MFI)
3966	119	99	Positive	A11 (4129) A66 (6127)	Positive	DR52 (1662) DQ7 (4770)	Unacceptable	
4661	119	70	Positive	A1101 (1924) A6601 (4599)	Positive	DR52 (1257) DQ7 (2058)	Unacceptable	151AHA, 193AV; 55PP, 57V
8001	119	95	Positive	A1101 (3117) A6601 (8196)	Positive	DR52 (1587) DQ7 (5769)	Unacceptable	B*41:02 is not included on LSAB panel
8029	119	26%	Positive	A11 (1461) A6601 (3353)	Positive	DQ7 (843) DQ9 (784)	Unacceptable	Intermediate risk
8035	119	87%	Positive	A1101 (1971) A6601 (9562)	Positive	DR52 (2446) DQ7 (6560)	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	119	95	Positive	A11 (2449) A66 (5230)	Positive	DR52 (1841) DQ7 (4685)	Unacceptable	DR52 DSA allele-specific (DRB3*01:01)
8080	119	95	Positive	A11 (3886) A66 (11968)	Positive	DR52 (2319) DQ7 (7882)	Unacceptable	
8083	119	98.62	Positive	A11 (3183) A66 (9667)	Positive	DR52 (1814) DQ7 (5480)	Unacceptable	
8096	119		Positive	A11 (1639) A66 (7037)	Positive	DR52 (1689) DQ7 (5753) DQA1*05 (5585)	Unacceptable	
8103	119	10	Positive	A11 (643) A66 (2034) A1101 (643) A1102 (607) A6601 (2034) A6602 (629)	Positive	DQ3 (965) DQA1*04 (663) DQA1*05 (692)	Unacceptable	Low MFI class II antibodies and class 1 positive antibodies
8111	119	83	Positive	A11 (1800) A66 (7400)	Positive	DR52 (2000) DQ7 (5000)	Unacceptable	

Table 25. Individual Virtual crossmatch results for Serum #119 vs Donor# V2

Donor #V2 HLA A*02:01-A*03:01-B*35:03-B*57:03-C*04:01-C*07:01-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQB1*06:04-DPA1*01:05-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	119	98	Positive	A2 (7605) B57 (16889)	Positive	DR52 (1904)	Unacceptable	
230	119	93	Positive	A2 (8882) B57 (19105)	Positive		Unacceptable	
774	119	94	Positive	A2 (6809) B57 (18267)	Positive	No Class II DSA	Unacceptable	
792	119	95	Positive	A2 (6028) B57 (15292)	Positive	No Class II DSA	Unacceptable	
1426	119	99%	Positive	A2 (4617) B57 (17096)	Positive	DR52 (1721)	Unacceptable	
1461	119		Positive	A2 (916) B57 (4657)	Positive		Unacceptable	
2400	119	94%	Positive	A2 (6549) B57 (17180)	Positive	DR52 (1351)	Unacceptable	Class II DSA is weak. Positive due to Class I reactivity.
3224	119	97	Positive	A2 (9010) B57 (19744)	Positive	DR52 (2172)	Unacceptable	
3753	119	94.82	Positive	A2 (6118) B57 (18584)	Positive		Unacceptable	The patient also displays DSA to DRB3*03:01 (2167 MFI)
3966	119	99	Positive	A2 (7204) B57 (18133)	Positive	DR52 (1662)	Unacceptable	
4661	119	70	Positive	A2 (2361) B57 (8746)	Positive	DR52 (912)	Unacceptable	62GE, 193AV, 57V
8001	119	95	Positive	A2 (7634) B57 (18124)	Positive	DR52 (1798)	Unacceptable	B*35:03, C*07:01 are not included on LSAB panel; DRB1*13:02 is not included on LSAB panel
8029	119	26%	Positive	A2 (3159) B57 (8017)	Positive	No Class II DSA	Unacceptable	No donor specific class II anti HLA antibodies
8035	119	87%	Positive	A2 (6905) B57 (20268)	Positive	DR52 (2884)	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	119	95	Positive	A2 (5906) B57 (18412)	Positive	DR52 (2094)	Unacceptable	DR52 DSA allele-specific (DRB3*03:01)
8080	119	95	Positive	A2 (9618) B57 (19794)	Positive	DR52 (2558)	Unacceptable	Patient demonstrates Class I reactivity
8083	119	98.62	Positive	A2 (8030) B57 (17785)	Positive	DR52 (2248)	Unacceptable	Due to expression of Class I on B cells
8096	119		Positive	A2 (3831) B57 (17038)	Positive	DR52 (1542)	Unacceptable	
8103	119	10	Positive	A203 (860) A2 (1639) B57 (3854)	Positive	No Class II DSA	Unacceptable	Class I antibodies positive
8111	119	83	Positive	A2 (5000) B57 (16000)	Positive	DR52 (1500)	Unacceptable	

Table 26. Individual Virtual crossmatch results for Serum #119 vs Donor# V3

Donor #V3 HLA A*26:01-A*30:01-B*13:02-B*38:01-C*06:02-C*12:03-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*02:01-DPB1*11:01-DPB1*17:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	119	98	Positive	A26 (8353)	Positive	DR7 (5690)	Unacceptable	
230	119	93	Positive	A26 (10210)	Positive	DR7 (5877)	Unacceptable	
774	119	94	Positive	A26 (8566)	Positive	DR7 (3852)	Unacceptable	
792	119	95	Positive	A26 (6928)	Positive	DR7 (5048)	Unacceptable	
1426	119	99%	Positive	A26 (6507)	Positive		Unacceptable	
1461	119		Positive	A26 (1441)	Positive	DR7 (1170)	Unacceptable	
2400	119	94%	Positive	A26 (7468)	Positive	DR7 (5056)	Unacceptable	
3224	119	97	Positive	A26 (9895)	Positive	DR7 (5899)	Unacceptable	
3753	119	94.82	Positive	A26 (8148)	Positive	DR7 (5594)	Unacceptable	
3966	119	99	Positive	A26 (8116)	Positive	DR7 (5621) DQA1*02 (4281)	Unacceptable	
4661	119	70	Positive	A26 (4060)	Positive	DR7 (3597)	Unacceptable	193AV, 57V
8001	119	95	Positive	A26 (8485) A30 (740)	Positive	DR7 (5462)	Unacceptable	
8029	119	26%	Positive	A26 (3101)	Positive	DR7 (1591)	Unacceptable	Intermediate risk
8035	119	87%	Positive	A26 (8997)	Positive	DR7 (8417)	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	119	95	Positive	A26 (7334)	Positive	DR7 (4685)	Unacceptable	
8080	119	95	Positive	A26 (11431)	Positive	DR7 (7911)	Unacceptable	Patient demonstrates Class I reactivity
8083	119	98.62	Positive	A26 (8859)	Positive	DR7 (5507)	Unacceptable	
8096	119		Positive	A26 (6060)	Positive	DR7 (6042)	Unacceptable	
8103	119	10	Borderline	A26 (1533)	Borderline	DR7 (1254) DQA1*02 (965)	Acceptable-	Low MFI antibody
8111	119	83	Positive	A26 (6900)	Positive	DR7 (6000)	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #119 vs Donor# V4

Donor #V4 HLA 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

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	119	98	Positive	A2 (7605)	Positive	DR7 (5690)	Unacceptable	
230	119	93	Positive	A2 (8882)	Positive	DR7 (5877)	Unacceptable	
774	119	94	Positive	A2 (6809)	Positive	DR7 (3852)	Unacceptable	
792	119	95	Positive	A2 (6028)	Positive	DR7 (5048)	Unacceptable	
1426	119	99%	Positive	A2 (4617)	Positive	DR7 (5191)	Unacceptable	
1461	119		Positive	A2 (916)	Positive	DR7 (1170)	Unacceptable	
2400	119	94%	Positive	A2 (6549)	Positive	DR7 (5056)	Unacceptable	
3224	119	97	Positive	A2 (9010)	Positive	DR7 (5899)	Unacceptable	
3753	119	94.82	Positive	A2 (6118)	Positive	DR7 (5594)	Unacceptable	
3966	119	99	Positive	A2 (7204)	Positive	DR7 (5621) DQA1*02 (4281)	Unacceptable	
4661	119	70	Positive	A2 (2361)	Positive	DR7 (3597)	Unacceptable	62GE, 193AV, 57V
8001	119	95	Positive	A2 (7634)	Positive	DR7 (5462) DPA1*02 (550)	Unacceptable	C*12:02 is not included on LSAB panel
8029	119	26%	Positive	A2 (3159)	Positive	DR7 (1591)	Unacceptable	Intermediate risk
8035	119	87%	Positive	A2 (6905)	Positive	DR7 (8417)	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	119	95	Positive	A2 (5906)	Positive	DR7 (4685)	Unacceptable	
8080	119	95	Positive	A2 (9618)	Positive	DR7 (7911)	Unacceptable	Patient demonstrates Class I reactivity
8083	119	98.62	Positive	A2 (8030)	Positive	DR7 (5507)	Unacceptable	Also due to expression of Class I on B cells
8096	119		Positive	A2 (3831)	Positive	DR7 (6042)	Unacceptable	
8103	119	10	Positive	A2 (1639)	Positive	DR7 (1254) DQA1*02 (965)	Unacceptable	Low MFI class 2 antibodies and positive class 1 antibodies
8111	119	83	Positive	A2 (5000)	Positive	DR7 (6000)	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #120 vs Donor# V1

Donor #V1 HLA A*11:01-A*66:01-B*41:02-B*44:02:01G-C*05:01-C*17:01:01G-DRB1*08:01-DRB1*13:03-DRB3*01:01-DQA1*04:01:01G-DQA1*05:01:01G-DQB1*03:01-DQB1*04:02-DPA1*01:03:01G-DPB1*04:01-DPB1*06:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	120	75	Positive	B44 (14648) B41 (15949) Cw17 (8053)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Positive
230	120	72	Positive	B44 (16423) B41 (22648)	-	No Class II DSA	Unacceptable	
774	120	73	Positive	B44 (15158) B41 (20935) Cw17 (10650)	Positive	No Class II DSA	Unacceptable	
792	120	77	Positive	B44 (13502) B41 (18956) Cw17 (9344)	Positive	No Class II DSA	Unacceptable	
1426	120	79%	Positive	A66 (10349) B44 (14046) B41 (19272) Cw17 (9052)	Positive	No Class II DSA	Unacceptable	
1461	120		Positive	B44 (3927) B41 (5102) Cw17 (1291)	Positive	No Class II DSA	Unacceptable	
2400	120	78%	Positive	B44 (17959) B41 (23586) Cw17 (12860)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA.
3224	120	81	Positive	B44 (16768) B41 (22211) Cw17 (12526)	Positive	No Class II DSA	Unacceptable	
3753	120	77.93	Positive	B44 (15416) B41 (19493) Cw17 (12946)	Positive	No Class II DSA	Unacceptable	
3966	120	72	Positive	B44 (19624) B41 (23739) Cw17 (6962)	Positive	No Class II DSA	Unacceptable	B*41:02 not covered in LSAB panel
4661	120	41	Positive	B44 (8485) B41 (9266) Cw17 (2519)	Positive	No Class II DSA	Unacceptable	24T, 163EW
8001	120	85	Positive	B44 (16963) Cw5 (577) Cw17 (12600)	Positive	No Class II DSA	Unacceptable	B*41:02 is is not included on LSAB panel
8029	120	24%	Positive	A66 (8208) B44 (8906) B41 (10613) Cw17 (4515)	Positive	No Class II DSA	Unacceptable	High risk
8035	120	72%	Positive	B44 (16306) B41 (22774) Cw17 (11652)	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 not Complement binding.
8050	120	82	Positive	B44 (15899) B41 (20462) Cw17 (8452)	Positive	No Class II DSA	Unacceptable	
8080	120	82	Positive	B44 (19610) B41 (22794) Cw17 (14727)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	120	77.2	Positive	B44 (15002) Cw17 (12159)	Positive	No Class II DSA	Unacceptable	Possible DSA to B*41:02 but unable to determine due to no Single Antigen Bead for B*41:02; Due to expression of Class I on B cells
8096	120		Positive	A66 (8643) B44 (15949) B41 (18869) Cw17 (10140)	Positive	No Class II DSA	Unacceptable	
8103	120	22	Positive	A66 (4603) B44 (4519) B41 (4457) Cw17 (1075) A6602 (4603)	Positive	No Class II DSA	Unacceptable	Class I antibodies positive
8111	120	67	Positive	B44 (13700) B41 (19000) Cw17 (9800)	Positive	No Class II DSA	Unacceptable	

Table 29. Individual Virtual crossmatch results for Serum #120 vs Donor# V2

Donor #V2 HLA A*02:01-A*03:01-B*35:03-B*57:03-C*04:01-C*07:01-DRB1*13:02-DRB3*03:01-DQA1*01:02-DQB1*06:04-DPA1*01:05-DPB1*04:01

Ctr	Patient	%	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	120	75	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
230	120	72	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
774	120	73	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
792	120	77	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
1426	120	79%	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
1461	120		Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
2400	120	78%	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
3224	120	81	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
3753	120	77.93	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
3966	120	72	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
4661	120	41	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8001	120	85	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	B*35:03, C*07:01 are not included on LSAB panel
8029	120	24%	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	Standard risk
8035	120	72%	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8050	120	82	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8080	120	82	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8083	120	77.2	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8096	120		Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8103	120	22	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	
8111	120	67	Negative	No Class I DSA	Negative	No Class II DSA	Acceptable	

Table 30. Individual Virtual crossmatch results for Serum #120 vs Donor# V3

Donor #V3 HLA A*26:01-A*30:01-B*13:02-B*38:01-C*06:02-C*12:03-DRB1*07:01-DRB4*01:01-DRB4*01:03-DQA1*02:01-DQB1*02:02-DPA1*02:01-DPB1*11:01-DPB1*17:01

Ctr	Patient	%	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	120	75	Positive	B13 (19870)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Positive
230	120	72	Positive	B13 (13250)	Positive	No Class II DSA	Unacceptable	
774	120	73	Positive	B13 (22172)	Positive	No Class II DSA	Unacceptable	
792	120	77	Positive	B13 (19050)	Positive	No Class II DSA	Unacceptable	
1426	120	79%	Positive	B13 (18459)	Positive	No Class II DSA	Unacceptable	
1461	120		Positive	B13 (4746)	Positive	No Class II DSA	Unacceptable	
2400	120	78%	Positive	B13 (22957) B38 (1358)	Positive	No Class II DSA	Unacceptable	Positive due to Class I DSA.
3224	120	81	Positive	B13 (21529) B38 (1323)	Positive	No Class II DSA	Unacceptable	
3753	120	77.93	Positive	B13 (18952)	Positive	No Class II DSA	Unacceptable	
3966	120	72	Positive	B13 (18702)	Positive	No Class II DSA	Unacceptable	
4661	120	41	Positive	B13 (7560)	Positive	No Class II DSA	Unacceptable	24T, 163EW
8001	120	85	Positive	B13 (22089) B38 (988)	Positive	No Class II DSA	Unacceptable	
8029	120	24%	Positive	B13 (10007)	Positive	No Class II DSA	Unacceptable	High risk
8035	120	72%	Positive	B13 (24096) B38 (959)	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 not Complement binding.
8050	120	82	Positive	B13 (18297)	Positive	No Class II DSA	Unacceptable	
8080	120	82	Positive	B13 (22656)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	120	77.2	Positive	B13 (20210) B38 (1100)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	120		Positive	B13 (18938)	Positive	No Class II DSA	Unacceptable	
8103	120	22	Positive	B13 (2930)	Positive	No Class II DSA	Unacceptable	Class I antibody positive
8111	120	67	Positive	B13 (19500)	Positive	No Class II DSA	Unacceptable	

Table 31. Individual Virtual crossmatch results for Serum #120 vs Donor# V4

Donor #V4 HLA 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

Ctr	Patient	%	Virtual T Cell Prediction	Class IDSA(MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	120	75	Positive	B13 (19870)	Positive	No Class II DSA	Unacceptable	Positive due to Class I Positive
230	120	72	Positive	B13 (22360)	Positive	No Class II DSA	Unacceptable	
774	120	73	Positive	B13 (22172)	Positive	No Class II DSA	Unacceptable	
792	120	77	Positive	B13 (19050)	Positive	No Class II DSA	Unacceptable	
1426	120	79%	Positive	B13 (18459)	Positive	No Class II DSA	Unacceptable	
1461	120		Positive	B13 (4746)	Positive	No Class II DSA	Unacceptable	
2400	120	78%	Positive	B13 (22957)	Positive	No Class II DSA	Unacceptable	Positive to Class I DSA.
3224	120	81	Positive	B13 (21529)	Positive	No Class II DSA	Unacceptable	
3753	120	77.93	Positive	B13 (18952)	Positive	No Class II DSA	Unacceptable	
3966	120	72	Positive	B13 (18702)	Positive	No Class II DSA	Unacceptable	
4661	120	41	Positive	B13 (7560)	Positive	No Class II DSA	Unacceptable	24T, 163EW
8001	120	85	Positive	B13 (22089)	Positive	No Class II DSA	Unacceptable	C*12:02 is not included on LSAB panel; DRB5*01:02 is not included on LSAB panel
8029	120	24%	Positive	B13 (10007)	Positive	No Class II DSA	Unacceptable	High risk
8035	120	72%	Positive	B13 (24096)	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 not Complement binding.
8050	120	82	Positive	B13 (18297)	Positive	No Class II DSA	Unacceptable	
8080	120	82	Positive	B13 (22656)	Positive	No Class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	120	77.2	Positive	B13 (20210)	Positive	No Class II DSA	Unacceptable	Due to expression of Class I on B cells
8096	120		Positive	B13 (18938)	Positive	No Class II DSA	Unacceptable	
8103	120	22	Positive	B13 (2930)	Positive	No Class II DSA	Unacceptable	Class I antibody positive
8111	120	67	Positive	B13 (19500)	Positive	No Class II DSA	Unacceptable	

Table 32: Individual Cutoff values and Pretreatment - Exchange 20

Ctr	Serum		Pos Cutoff		Pos Cutoff		Sera pretreatment	Ctr	Serum		Pos Cutoff		Pos Cutoff		Sera pretreatment
	#	Locus	Value	Locus	Value	Manufacturer			#	Locus	Value	Locus	Value	Manufacturer	
230	117	A	4000	DRB1	4000	One Lambda	None	2400	117	A	2000	DRB1	2000	One Lambda	EDTA
		B	4000	DRB3/4/5	4000					B	2000	DRB3/4/5	2000		
		C	10000	DQA1	4000					C	2000	DQA1	2000		
				DQB1	4000					Class I	2000	DQB1	2000		
				DPB1	10000							DPB1	2000		
				Class II								Class II	2000		
774	117	A	2000	DRB1	2000	One Lambda	DTT	3224	117	A		DRB1		One Lambda	EDTA
		B	2000	DRB3/4/5	2000					B		DRB3/4/5			
		C	5000	DQA1	2000					C		DQA1			
		Class I	2000	DQB1	2000					Class I	1000	DQB1			
				DPB1	5000							DPB1			
				Class II	2000							Class II	1000		
792	117	A	1500	DRB1	1500	One Lambda	FBS/EDTA	3753	117	A	1000	DRB1	1000	One Lambda	DTT
		B	1500	DRB3/4/5	1500					B	1000	DRB3/4/5	1000		
		C	1500	DQA1	1500					C	2000	DQA1	1000		
		Class I	1500	DQB1	1500					Class I	1000	DQB1	1000		
				DPB1	1500							DPB1	2000		
				Class II	1500							Class II	1000		
1160	117	A		DRB1		One Lambda	EDTA	4661	117	A	1000	DRB1	1000	Lifecodes	None
		B		DRB3/4/5						B	1000	DRB3/4/5	1000		
		C		DQA1						C	1000	DQA1	1000		
		Class I	1000	DQB1						Class I	1000	DQB1	1000		
				DPB1								DPB1	1000		
				Class II	1000							Class II	1000		
1426	117	A	1000	DRB1	1000	One Lambda	DTBA	5214	117	A	2000	DRB1	2000	One Lambda	None
		B	1000	DRB3/4/5	1000					B	2000	DRB3/4/5	2000		
		C	1000	DQA1	1000					C	2000	DQA1	2000		
		Class I	1000	DQB1	1000					Class I	2000	DQB1	2000		
				DPB1	1000							DPB1	2000		
				Class II	1000							Class II	2000		

Table 32: Individual Cutoff values and Pretreatment - Exchange 20

Ctr	Serum #	Pos Cutoff		Pos Cutoff		Manufacturer	Sera pretreatment	Ctr	Serum #	Pos Cutoff		Pos Cutoff		Manufacturer	Sera pretreatment
		Locus	Value	Locus	Value					Locus	Value	Locus	Value		
8001	117	A		DRB1		One Lambda	EDTA	8062	117	A	1000	DRB1	1000	One Lambda	DTT
		B		DRB3/4/5						B	1000	DRB3/4/5	1000		
		C		DQA1						C	1000	DQA1	1000		
		Class I	1000	DQB1						Class I		DQB1	1000		
				DPB1								DPB1	1000		
		Class II		Class II	1000					Class II		Class II			
8029	117	A	500	DRB1	500	Lifecodes- Immucor	None	8083	117	A		DRB1		One Lambda	EDTA
		B	500	DRB3/4/5	500					B		DRB3/4/5			
		C	500	DQA1	500					C		DQA1			
		Class I	500	DQB1	500					Class I	2000	DQB1			
				DPB1	500							DPB1			
		Class II		Class II	500					Class II		Class II	2000		
8035	117	A	700	DRB1	700	One Lambda	DTT,FCS	8096	117	A		DRB1		One Lambda	DTT
		B	700	DRB3/4/5	700					B		DRB3/4/5			
		C	700	DQA1	700					C		DQA1			
		Class I		DQB1	700					Class I		DQB1			
				DPB1	700							DPB1			
		Class II		Class II						Class II		Class II			
8050	117	A	1000	DRB1	1000	One Lambda	DTT	8103	117	A	77	DRB1	43	Immucor	Heat Inactivation
		B	1000	DRB3/4/5	1000					B	77	DRB3/4/5	43		
		C	1000	DQA1	1000					C	108	DQA1	60		
		Class I	1000	DQB1	1000					Class I	15273	DQB1	60		
				DPB1	1000							DPB1	28		
		Class II		Class II	1000					Class II		Class II	18489		