

Report of the 18th Flow and Virtual Crossmatch Exchange

December 16, 2019

Cells	103-104
Serum	105-108

For the 18th Flow and Virtual Crossmatch Exchange, Serum 102 (patient 2) and virtual donor V1 from Flow Crossmatch Exchange 17 (June 2019) were re-examined as serum 105 and cell 103. A comparison of virtual crossmatch (VXM) predictions (serum 102 vs. V1) against the physical flow crossmatch (FXM) (serum 105 vs. cell 103) are summarized in [Part 1](#) of this

report. [Part 2](#) examines the single antigen data for the 4 sera examined (serum nos. 105 - 108) in this study. [Part 3](#) summarizes the flow crossmatch results for 2 cells (cell nos. 103 - 104) against the 4 sera. Finally, in [Part 4](#), the virtual crossmatch predictions for 4 potential donors (V1 - V4) against 2 sera (serum 107 and serum 108) are examined.

Part 1

Physical Flow Cytometric Crossmatch vs. Virtual Crossmatch

Among the 22 labs submitting VXM predictions for **serum 102 vs. donor V1** in Exchange 17, 16 labs reported back physical T– FXM results and 15 labs reported back physical B-cell FXM results for the patient-donor pair (**serum 105 vs. cell 103**) in Exchange 18 (Table 1a). For the physical crossmatch, 13 out of 16 labs (81%) reported the T-cell FXM as negative in

agreement with predictions (Table 1b). Of the remaining labs, 1 lab reported the physical T-cell FXM as positive and 2 reported it as borderline. Good agreement was also achieved between virtual B-cell predictions and the physical B-cell FXM, as 15 out of 15 labs reported the physical B-cell FXM as positive in agreement with predictions.

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

Exchange 017					Exchange 018				
Virtual Crossmatch - Serum 102 (Patient 2) vs. Donor V1					Physical Flow Crossmatch - Serum 105 vs. Cell 103				
Donor	Serum no.	#Labs	T-cell Prediction	B-cell Prediction	Cell	Serum no.	#Labs	T-cell Results	B-cell Results
V1	102	16	Negative(15) Borderline(1)	Positive(15) NT(1)	103	105	16	Negative(13) Borderline(2) Positive(1)	Positive(15) NT(1)

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

		T-cell Virtual XM (Exchange 17)		
		+	-	Ø
Physical T-cell FXM (Exchange 18)	+		1	
	-		12	1
	Ø		2	

		B-cell Virtual XM (Exchange 17)		
		+	-	Ø
Physical B-cell FXM (Exchange 18)	+	14		1
	-			
	Ø	1		

+/- = positive/negative

Ø = uncertain/not typed

n = number of labs

The reporting of DSA and DSA strength was also consistent across the 2 studies. No class I DSA were reported in either study, however labs did report the presence of strong class II DSA (Table 1c). In Exchange 17, anti-DQ6 reactivity was reported by labs, with median MFI = 23889. In Ex-

change 18, strong anti-DQ6 reactivity was reported once again, with MFI = 23594. In addition, a few labs also reported anti-DQA1*01 reactivity against the donor. In Exchange 17, DQA1*01 was reported with a median MFI = 22000. In Exchange 18, the median MFI was reported as 22797.

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

Cell #103 (Donor V1)HLA Genotype: A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPB1*04:01:01

Exchange 017					Exchange 018				
Virtual Crossmatch - Serum 102 (Patient 2) vs. Donor V1					Physical Flow Crossmatch - Serum 105 vs. Cell 103				
Ctr	Virtual T-cell Prediction	Class I DSA(MFI)	Virtual B-cell Prediction	Class II DSA(MFI)	Ctr	T-Cell RESULT	Class I DSA(MFI)	B-Cell RESULT	Class II DSA(MFI)
230	Negative	no class I DSA	NT	DQ6(25005)	230	Negative	no class I DSA	Positive	DQ6
774	Negative	no class I DSA	Positive	DQ6(24410) DQA1*01(24410)	774	Negative	no class I DSA	Positive	DQB1*06:04(22103.61)
792	Negative	no class I DSA	Positive	DQ6(21674)	792	Negative	no class I DSA	Positive	DQ6(20703)
2400	Negative	no class I DSA	Positive	DQ6(23786)	2400	Negative	no class I DSA	Positive	DQA1*01:02/ DQB1*06:04(24880)
3224	Negative	no class I DSA	Positive	DQ6(22055) DQA1*01(22693)	3224	Negative	no class I DSA	Positive	DQ6(23595) DQA1*01:02(23402)
3753	Negative	no class I DSA	Positive	DQ6(22171)	3753	Negative	no class I DSA	Positive	DQ6(22223)
3766	Negative	no class I DSA	Positive	DQ6(29632)	3766	Negative	no class I DSA	Positive	DQ6(23727)
3966	Negative	no class I DSA	Positive	DQ6(25547) DQA1*01(24711)	3966	Borderline	NT	Positive	NT
4661	Negative	no class I DSA	Positive	DQ6(14674)	4661	Negative	no class I DSA	Positive	DQB1*06:04(13182)
8001	Negative	no class I DSA	Positive	DQ6(23161) DQA1*01(24165)	8001	Negative	no class I DSA	Positive	DQ6(22662)
8035	Negative	no class I DSA	Positive	DQ6(25978) DQA1*01(27326)	8035	Negative	no class I DSA	Positive	DQA1*01:02(26723), DQB1*06:04(25102))
8050	Negative	no class I DSA	Positive	DQ6(25197)	8050	Negative	no class I DSA	Positive	DQ6(22898)
8083	Negative	no class I DSA	Positive	DQ6(18533)	8083	Borderline	no class I DSA	Positive	DQB1*06:04(24273)
8096	Negative	no class I DSA	Positive	DR13(12678) DQA1*01(5887)	8096	Negative	no class I DSA	NT	
8103	Borderline	Cw4 (583)	Positive	DQ6(16810) DQA1*01(16810)	8103	Negative	no class I DSA	Positive	DQB1*06:04(13199)
8111	Negative	no class I DSA	Positive	DQ6(24360)	8111	Positive	B*57:03(3036)	Positive	DQB1*06:04(23500) DQA1*01:02(20000)

Part 2

Class I and class II Luminex single antigen results for serum samples 105 - 108 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 105 was previously examined as serum 102 in Exchange 17. In this present study, anti-B13, -B27, -B47, -B60, -B61, and -B7 reactivity was once again reported by 100% of labs. Strong class II reactivity was also reported in the serum, with labs reporting reactivity to DQ4, DQ5, DQ6, DR15, DR16, and DR51 in complete consensus. The following table shows the consistency in the reporting of MFI values across the 2 studies:

Antigen	FXM 18 MFI	FXM 17 MFI	Antigen	FXM 18 MFI	FXM 17 MFI
B13	4187	4620	DQ4	10895	9649
B27	6201	6589	DQ5	23900	22693
B47	3132	3355	DQ6	23594	23889
B60	5722	6363	DR15	20410	20368
B61	4858	5431	DR16	15891	16492
B7	11000	11544	DR51	15822	16543

Only a single DSA was reported against cells 103 and 104 in serum 105. Against cell 103, strong anti-DQ6 (23594) reactivity was reported, while against cell 104, anti-B13 reactivity (4187) was reported by labs.

Serum 106 was reported as strongly positive for class I reactivity, with > 90% of labs reporting reactivity to A26, A29, A34, B38, B54, B57, B58, B63, A25, A30, A43, B55, and B67. MFI values for each ranged from 4725 to 17000. Strong DR and DP reactivity was also detected in this sample, with > 90% of labs reporting reactivity to DP2, DP3, DR10, DR11, DR12, DR13, DR14, DR17, DR18, DR52, DR7, DP18, and DP6. MFI values ranged from 3317 to 16553.

Anti-B57 (12000), -DR13 (7521), and -DR52 (9967) reactivity was reported against cell 103. Against cell 104, multiple class I (A26, B38, A30) and class II (DR7, DP17) reactivity was reported with MFI values ranging from 3317 to 17000.

Genotypes of cells provided by UCLA

Cell 103 (Hispanic) - A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPB1*04:01:01

Cell 104 (Hispanic) - A*26:01:01-A*30:01:01-B*13:02:01-B*38:01:01-C*06:02:01-C*12:03:01-DRB1*07:01:01-DRB4*01:01:01-DRB4*01:03:01-DQA1*02:01:01-DQB1*02:02-DPB1*11:01:01-DPB1*17:01:01

Serum 107 was reported as reactive to a number of class I specificities, including A25, A26, A29, A34, B57, B58, B63, and A43. Each were reported by > 90% of labs, with respective MFI = 11733, 11686, 3960, 5519, 7500, 6204, 6000, and 6965. Class II reactivity was reported in this sample as well, with > 90% of labs reporting anti-DP2, -DP3, -DR11, -DR13, -DR14, -DR17, -DR52, -DP14, -DP17, -DP18, -DP6, -DR10, and -DR18 reactivity. MFI values for each ranged from 3241 to 13183. Additional strong anti-DP28 (11234), -DP9 (13768), DP10 (8890), DP20 (13547), and DP4/DP402 (10329) reactivity was also reported by a number of labs.

Anti-B57 (7500), -DR13 (5416), and -DR52 (6321) reactivity was reported against cell 103 in this serum. Against cell 104, multiple DSA were reported, with labs reporting anti-A26 (11686), -B38 (2400), -DP17 (12325), and -DR7 (1950) reactivity. Additional reactivity to A30 (3251) was also reported by 7 labs against cell 104.

Serum 108 was broadly reactivity to a number of 2C, 5C, 7C, and 12C specificities, including anti-A2, -A68, -A69, -B18, -B35, -B45, -B46, -B50, -B54, -B55, -B56, -B57, -B58, -B62, -B67, -B71, -B72, -B75, and -B76 reactivity. Each were reported by 100% of labs, with MFI values ranging from 3348 to 15930. Strong reactivity to a number of DP and DR specificities was also reported in this sample, including reactivity to DP2, DP3, DQ2, DR11, DR13, DR14, DR17, DR18, DR52, and DR7. Each were reported by 100% of labs, with MFI values ranging from 3103 to 22244.

Multiple class I and II DSA were reported against cell 103 and 104 in this sample. Against cell 103, anti-A2 (15930), -B35 (3716), -B57 (12520), -DR13 (9718), and -DR52 (17000) reactivity was reported. Against cell 104, labs reported anti-B13 (3694), -B38 (2935), -DQ2 (7061), -DR7 (3103), and -DP17 (18071) reactivity.

Conclusion:

Strong class I and class II reactivity was reported in serum samples 105 - 108, with MFI values for peak DSA ranging from 11000 to 23694. As a result of the strength of the antibodies, good concordance (>90%) was achieved among labs in the reporting of class I and class II specificities. The reporting of DSA against cells 103 and 104 was also consistent among labs across the 4 sera in the presence of multiple or strong DSA.

Part 3

Flow cytometric crossmatch results for cell 103 and cell 104 against sera sample nos. 105 - 108 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 103. Good agreement ($\geq 80\%$) was achieved for all 4 T-cell FXM against serum samples 105 - 108. Three were reported as positive in the presence of strong class I DSA (MFI ≥ 7500) and 1 was reported as negative. Good agreement was also achieved among the B-cell FXM, as all 4 were reported as positive by 100% of labs. For each B-cell FXM, strong (MFI > 23000) or multiple class II DSA were present.

Cell 104. Good agreement ($\geq 80\%$) was achieved for the T- and B-cell FXM against serum samples 106 - 108. All 6 were reported as positive in

the presence of multiple class I and class II DSA. For the crossmatch against serum 105, no agreement was achieved among labs for either the T- or B-cell FXM. In the case of the T-cell FXM, 12 labs reported it as positive, 6 reported it as negative, and 3 reported it as borderline in the presence of a single class I DSA (B13), with MFI = 4187. Similarly for the B-cell FXM, 12 labs reported it as positive, 5 reported it as negative, and 2 reported borderline results, in the absence of class II DSA.

Table 2. Summary of Flow crossmatch results for Cell #103 - #104 vs. Serum #105 - #108

Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results	Cell no.	Serum no.	#Labs	T-cell Results	B-cell Results
103	105	21	NEG(18) POS(1) Borderline(2)	POS(19) NT(2)	104	105	21	POS(12) NEG(6) Borderline(3)	POS(12) NEG(5) Borderline(2) NT(2)
103	106	21	POS(21)	POS(19) NT(2)	104	106	21	POS(21)	POS(19) NT(2)
103	107	21	POS(18) NEG(2) Borderline(1)	POS(19) NT(2)	104	107	21	POS(21)	POS(18) NEG(1) NT(2)
103	108	21	POS(21)	POS(19) NT(2)	104	108	21	POS(19) Borderline(1) NEG(1)	POS(19) NT(2)
indicates consensus < 80%									

Conclusion:

The presence of strong class I and class II DSA, resulted in good concordance ($< 80\%$) to be achieved for 7 out of 8 T- and B-cell FXM. In each case, either multiple DSA or a single DSA with MFI > 7500 was present.

In the case of serum 105 against cell 104, no agreement was achieved

for either the T- or B-cell FXM. The presence of a single DSA (B13), with MFI < 5000 , resulted in some labs to report the FXM as positive, and others to report it as either borderline or negative. This shows the sensitivity of the flow crossmatch is variable in the presence of weak DSA.

Part 4

Virtual crossmatch predictions for donor V1 - V4 against sera (patient) samples 107 and 108 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 the virtual **T-cell crossmatch**, all but 1 virtual donor-patient pair achieved a consensus of > 80%. Among them, 6 were predicted to be positive in the presence of strong and/or multiple class I DSA. For serum 107 vs. donor V2, no agreement was achieved among labs in virtual T-cell predictions, as 13 labs predicted the expected physical T-FXM to be negative, 5 predicted it to be positive, and 4 predicted it to be borderline. The labs which predicted the expected T-cell FXM to be borderline or positive, reported weak anti-A68 (2061) reactivity against virtual donor V2.

For the **virtual B-cell crossmatch**, 7 pairs of virtual crossmatches were predicted to be positive by a consensus of > 80%. The 1 remaining virtual donor-patient pair (serum 108 vs. donor V4) achieved no agreement. While most labs (n=16) predicted the expected B-cell FXM to be positive, 4 predicted it to be negative, and 1 predicted borderline results, in the presence of weak anti-B44 (4323) reactivity. No class II DSA were detected against donor V4 in serum 108.

Table 3. Summary of Virtual Crossmatch Predictions (Serum #107 - #108 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	107	22	POS(22)	POS(22)	Unacceptable(22)	V2	107	22	NEG(13) POS(5) Borderline(4)	POS(19) NEG(1) Borderline(1) NT(1)	Unacceptable(18) Acceptable(1) Other(3)
V1	108	22	POS(22)	POS(22)	Unacceptable(22)	V2	108	22	POS(22)	POS(22)	Unacceptable(22)
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	107	22	NEG(21) POS(1)	POS(21) Borderline(1)	Unacceptable(20) Acceptable(2)	V4	107	22	POS(22)	POS(17) NEG(4) NT(1)	Unacceptable(22)
V3	108	22	POS(22)	POS(21) NT(1)	Unacceptable(22)	V4	108	21	POS(19) NEG(1) Borderline(1) NT(1)	POS(16) NEG(4) Borderline(1)	Unacceptable(19) Acceptable(1) Other(2)

indicates consensus < 80%

DSA Identification

Patient 1 (Serum 107)

Patient's fictional case history: This individual is a 43 year old male being evaluated for his second transplant. The patient's HLA type is A*02:01-A*24:02-B*08:01-B*35:02-C*04:01-C*07:01-DRB1*15:01-DRB1*15:02-DRB5*01:01-DQA1*01:01-DQA1*01:02-DQB1*05:01-DQB1*05:02-DPB1*01:01-DPB1*13:01-DPA1*02:01-DPA1*02:02. The HLA typing of his first transplant is A*02:01-A*24:07-B*08:01-B*35:01-C*04:01-C*07:01-DRB1*15:01-DRB5*01:01-DQA1*01:02-DQB1*05:02-DPB1*01:01.

For serum 107 against **donor V1**, labs predicted the expected T- and B-cell FXM to be positive in complete agreement. Multiple class I (A25, B58) and class II (DP17, DR52) DSA were reported against the donor, with respective MFI = 11733, 6204, 12325, and 6321. In addition, 12 labs reported anti-DR13 (5416) reactivity and 11 labs reported anti-DP3 (13183) (DPB1*03:01:01G, includes DPB1*104:01) against donor V1. In line with virtual predictions, renal transplant risk was assessed as unacceptable by all 22 labs.

Against **donor V2**, no agreement was achieved among labs in the reporting of class I DSA, as 11 labs reported anti-A68 (2061) reactivity against the donor and 11 labs indicated no class I DSA were present. As labs were split with respect to the reporting of class I DSA, they were also split in the reporting of T-cell predictions. Labs reporting the presence of DSA predicted the physical T-cell FXM to be positive or borderline, while those reporting no DSA were present, predicted it to be negative. By contrast, good agreement was achieved for B-cell predictions, with 19 labs predicting the expected physical B-cell FXM to be positive, in the presence of multiple class II DSA. Predicted renal transplant risk was assessed as unacceptable by 18 labs.

For serum 107 against **donor V3**, 21 labs predicted the expected physical T-cell FXM to be negative in the absence of class I DSA. One lab predicting it to be positive, reported DSA against the donor. Good agreement was achieved among virtual B-cell predictions as well, as 21 labs predicted the expected physical B-cell FXM to be positive in the presence of anti-DP4/DP402 (10329) reactivity against donor V3. Additional reactivity to other class II specificities, DR7 (1950) and DP3 (13183) was also reported by labs against the donor. Predicted renal transplant risk assessment was reported as unacceptable by 20 labs.

Against **donor V4**, strong anti-A26 (11686) reactivity was reported in this sample, which resulted in all 22 labs to predict the expected T-cell FXM to be positive. Fifteen labs reported no class II DSA against donor V4, while 7 others reported there were DSA (DP4, DQ8, and/or DQ6) present. The discrepancies in the reporting of class II DSA resulted in discrepancies in the reporting of B-cell predictions. Seventeen labs predicted the expected physical B-cell FXM to be positive, while 4 predicted it to be negative despite the presence of strong class I DSA. For renal transplant risk, 19 labs predicted the assessed risk to be unacceptable.

Virtual Donors – HLA genotype

Donor 1 (V1): A23:01:01-A*25:01:01-B*14:02:01-B*58:01:01-C*07:18-C*08:02:01-DRB1*01:01:01-DRB1*13:03:01-DRB3*01:01:02-DQA1*01:01:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*05:01-DPB1*104:01:01-DPB1*17:01:01.

Donor 2 (V2): A*02:01:01G-A*68:01:02G-B*07:01:01-B*49:01:01-C*07:01:01-C*07:02:01-DRB1*04:05:01-DRB1*11:02:01-DRB3*02:02:01-DRB4*01:03:01-DQA1*03:03:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*03:02:01-DPB1*04:01:01-DPB1*104:01:01.

Donor 3 (V3): A*02:06-A*32:01-B*14:01-B*52:01-C*04:01:01G-C*08:02-DRB1*04:04-DRB1*07:01-DRB4*01:01:01G-DQA1*02:01-DQA1*03:01:01G-DQB1*02:02-DQB1*03:02-DPB1*03:01-DPB1*04:02.

Donor 4 (V4): A*24:02:01-A*26:01:01-B*38:09-B*44:03:01-C*12:03:01-C*16:01:01-DRB1*04:02:01-DRB1*15:01:01-DRB4*01:03:01-DRB5*01:01:01-DQA1*01:02:01-DQA1*03:01:01-DQB1*03:02:01G-DQB1*06:02:01-DPB1*04:01:01.

Patient 2 (Serum 108)

Patient's fictional case history: This individual is a 32 year old male being evaluated for his first transplant. The patient's HLA type is A*01:01-A*03:01-B*07:02-B*08:01-C*07:01-C*07:02-DRB1*01:01-DRB1*04:01-DRB4*01:01-DQA1*01:01-DQA1*03:01-DQB1*03:02-DQB1*05:01-DPB1*01:01-DPB1*05:01.

For serum 102 (patient 2) against **donor V1**, multiple class I and class II DSA (B65, B58, DR13, DP17, DR52) were reported. Respective MFI values for each were 6334, 11170, 9718, 18071, 17000. In addition, a number of labs (n = 9) also reported anti-DP3 (18959) reactivity against donor V1, as DPB1*03:01:01G includes DPB1*104:01. The strength and number of DSA present resulted in all 22 labs to predict the expected physical T-cell and B-cell FXM to be positive. Consequently, predicted renal transplant risk assessment was reported as unacceptable by all 22 labs.

Anti-A2 (15590), -A68 (10012), -B49 (4008), and -DR52 (17000) reactivity was reported against **donor V2**. Additional reactivity to DR11 (19506) was reported by 11 labs, and 10 labs reported anti-DP3 (18959) reactivity against donor V1. In the presence of multiple DSA, good agreement was achieved among predictions. All 22 labs predicted the expected physical T- and B-cell FXM to be positive. In line with predictions, all 22 labs assessed the predicted risk for transplant as unacceptable.

Against **donor V3**, labs reported the presence of multiple DSA, including reactivity to A2 (15930), B52 (4254), B64 (5979), DP3 (18959), DP4/DP402 (20482), DQ2 (7061), and DR7 (3103). As a result, good agreement was achieved among predictions, with all labs predicting the expected T- and B-cell FXM to be positive. Predicted renal transplant risk assessment was reported as unacceptable in complete agreement as well.

Anti-B44 (4323) reactivity was reported against **donor V4** by all labs. In addition, a number of labs reported anti-B38 (2935) (n=14) and/or anti-A24 (1741) (n=9) reactivity against the donor. Several labs which did not report B38 as DSA, noted the donor's B*38:09 is not represented on the single antigen panel. Good agreement was achieved for T-cell predictions, as 19 out of 21 labs predicted the expected physical T-cell FXM to be positive. No agreement, however, was achieved for B-cell predictions in the absence of class II DSA. Sixteen labs predicted the expected physical B-cell FXM to be positive, 4 predicted it to be negative, and 1 predicted borderline results. For predicted renal transplant risk, 19 labs assessed the risk as unacceptable.

Conclusion

In the presence of multiple class I and class II DSA, labs reported the expected physical T- and B-cell FXM to be positive in good agreement (>80%). However, in the presence of weak antibodies (MFI < 3000), as in serum 107 vs. donor V2, greater variability was observed in predictions. Labs which reported anti-A68 (2061) reactivity against the donor predicted the expected physical T-cell FXM to be positive or borderline, while those

reporting there were no class I DSA present, predict it to be negative. For serum 108 vs. donor V4, no agreement was achieved for virtual B-cell predictions. Although the majority of labs (n=17) reported multiple class I DSA against the donor, the weakness of the antibodies (MFI < 5000) along with the absence of class II DSA, may have contributed to the variability observed in how the expected physical B-cell FXM was reported.

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

Flow Cytometric Crossmatch

Cell #103 HLA Genotype: A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPB1*04:01:01

Table 4. Individual Flow crossmatch results and DSA reported for Cell #103 vs. Serum #105

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
230	105	2.5	2			NEGATIVE	no class I DSA	9	42			POSITIVE	DQ6	1.3	6.9	YES
615	105	365	3			NEGATIVE	no class I DSA	365	378			POSITIVE	DQB1*06:04(20196)	325	325	YES
774	105	≥ 50	14			NEGATIVE	no class I DSA	≥ 120	332			POSITIVE	DQB1*06:04(22103.61)	234	298	NO
792	105	52	12			NEGATIVE	no class I DSA	106	398			POSITIVE	DQ6(20,703)	251	255	YES
1160	105	50	<0			NEGATIVE	no class I DSA	70	442			POSITIVE	DQ6(20660)	203	231	YES
2400	105	17	11			NEGATIVE	no class I DSA	23	321			POSITIVE	DQA1*01:02/ DQB1*06:04(24880)	40	25	YES
3135	105	1.2	3864	1,1		NEGATIVE						NT		3518		YES
3224	105	70				NEGATIVE	no class I DSA	140	352			POSITIVE	DQ6(23595); DQA1*01:02(23402)	194	218	YES
3753	105	50	15			NEGATIVE	no class I DSA	100	430			POSITIVE	DQ6(22223)	234	246	YES
3766	105	93	-8	N/A	N	NEGATIVE	no class I DSA	95	310	N/A	N/A	POSITIVE	DQ6(23727)	224	366	YES
3966	105	20	24			Borderline		50	249			POSITIVE		151	334	NO
4345	105					NEGATIVE						POSITIVE				NO
4661	105	10	7			NEGATIVE	no class I DSA	10	203			POSITIVE	DQB1*0604(13182)	198	216	YES
8001	105	50	20			NEGATIVE	no class I DSA	100	381			POSITIVE	DQ6(22662)	226	296	YES
8035	105	>48	10			NEGATIVE	no class I DSA	>90	462			POSITIVE	DQA1*01:02(26723), DQB1*06:04(25102))	152	188	YES
8050	105	50	13		882	NEGATIVE	no class I DSA	120	359		110554	POSITIVE	DQ6(22898)	29	155	YES
8062	105					NT						NT				
8083	105	90	112			Borderline	no class I DSA	150	312			POSITIVE	DQB1*06:04(24273)	331	464	YES
8096	105	20	0.24			NEGATIVE						NT		14.25		NO
8103	105	277	274	1.2		NEGATIVE	no class I DSA	1579	8487	1.7		POSITIVE	DQB1*06:04(13199)	231	947	NO
8111	105	7	20			POSITIVE	B*57:03(3036)	28	50			POSITIVE	DQB1*06:04(23500); DQA1*01:02(20000)	201	193	YES
8117	105	40	-7			NEGATIVE	no class I DSA	60	367			POSITIVE	DQ6(21120)	219	198	YES

Cell #103 HLA Genotype: A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPB1*04:01:01

Table 5. Individual Flow crossmatch results and DSA reported for Cell #103 vs. Serum #106

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
230	106	2.5	7.8			POSITIVE	B57	9	31.5			POSITIVE	DR13,DR52	1.3	6.9	YES
615	106	365	242			POSITIVE	B*57:03(11771), C*07:02(1075)	365	421			POSITIVE	DRB1*13:01(9870), DRB3*03:01(9471)	325	325	YES
774	106	≥ 50	166			POSITIVE	B*57:03(11422.19)	≥ 120	227			POSITIVE	DRB3*03:01(8440.45); DRB1*13:01(8175.99); DRB1*13:03(2422.84)	234	298	NO
792	106	52	197			POSITIVE	B57(11688)	106	371			POSITIVE	DR52(7930)	251	255	YES
1160	106	50	259			POSITIVE	B57(12474); potential weak Cw7(1339)	70	432			POSITIVE	DR13(13:01)(8686); DR52(8291)	203	231	YES
2400	106	17	170			POSITIVE	B*57:03(13025)	23	315			POSITIVE	DRB1*13:02(10839-13:01), DRB3*03:01(10503)	40	25	YES
3135	106	1,2	4442	1,3		POSITIVE						NT		3518		YES
3224	106	70	191			POSITIVE	B57(13005); Cw7(1036)	140	299			POSITIVE	DR13(9042); DR52(12653)	194	218	YES
3753	106	50	190			POSITIVE	B57(11796)	100	360			POSITIVE	DR13(4848), DR52(6556)	234	246	YES
3766	106	93	313	N/A	N/A	POSITIVE	B57(13916)	95	338	N/A	N/A	POSITIVE	DR13(11989), DR52(10762)	224	366	YES
3966	106	20	238			POSITIVE		50	257			POSITIVE		151	334	NO
4345	106					POSITIVE						POSITIVE				NO
4661	106	10	180			POSITIVE	B*57:03(3190)	10	241			POSITIVE	DRB1*13:02(5235), DRB3*03:01(5224)	198	216	YES
8001	106	50	255			POSITIVE	B57(15016)	100	371			POSITIVE	DR13(10702), DRB3*03:01(9731)	226	296	YES
8035	106	>48	254			POSITIVE	B*57:03(14260)	>90	397			POSITIVE	DRB1*13:02(7557), DRB3*03:01(9850)	152	188	YES
8050	106	50	230		8127	POSITIVE	B57(10406)	120	298		59210	POSITIVE	DR13(6583) DR52(6563)	29	155	YES
8062	106					NT						NT				
8083	106	90	235			POSITIVE	B*57:03(20357)	150	261			POSITIVE	DRB3*03:01(12481)	331	464	YES
8096	106	20	28.05			POSITIVE						NT		14.25		NO
8103	106	277	481	1.2		POSITIVE	B*57:01(MFI 2730)	1579	7864	1.7		POSITIVE	DRB1*13(2330), DRB3*03:01(2578), DPB1*04(5484)	231	947	NO
8111	106	7	111			POSITIVE	B*57:03(9900)	28	178			POSITIVE	DRB3*03:01(10500); DR13(7530)	201	193	YES
8117	106	40	251			POSITIVE	B57(9707)	60	391			POSITIVE	DR13(7521); DR52(7210)	219	198	YES

Cell #103 HLA Genotype: A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPB1*04:01:01

Table 6. Individual Flow crossmatch results and DSA reported for Cell #103 vs. Serum #107

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
230	107	2.5	4.2			POSITIVE	B57	9	21.8			POSITIVE	DR13,DR52	1.3	6.9	YES
615	107	365	146			POSITIVE	B*57:03(6779)	365	353			POSITIVE	DRB1*13:01(6341), DRB3*03:01(5194)	325	325	YES
774	107	≥ 50	113			POSITIVE	B*57:03(8418.94)	≥ 120	236			POSITIVE	DRB1*13:01(5731.33); DRB3*03:01(5587.3); DQB1*06:03(2856.1); DQB1*06:01(2044.86)	234	298	NO
792	107	52	132			POSITIVE	B57(4627)	106	300			POSITIVE	DR52(2815)	251	255	YES
1160	107	50	194			POSITIVE	B57(6485)	70	370			POSITIVE	DR13(13:01)(5416); DR52(4797)	203	231	YES
2400	107	17	96			POSITIVE	B*57:03(8091)	23	210			POSITIVE	DRB3*03:01(6156)	40	25	YES
3135	107	1.2	3689	1.0		NEGATIVE						NT		3518		YES
3224	107	70	119			POSITIVE	B57(9056)	140	243			POSITIVE	DR13(6967); DR52(9438)	194	218	YES
3753	107	50	128			POSITIVE	B57(6589)	100	278			POSITIVE	DR13(2773), DRB3*03:01(4164)	234	246	YES
3766	107	93	238	N/A	N/A	POSITIVE	B57(8504)	95	287	N/A	N/A	POSITIVE	DR52(5997), DR13(7059)	224	366	YES
3966	107	20	165			POSITIVE		50	210			POSITIVE		151	334	NO
4345	107					POSITIVE						POSITIVE				NO
4661	107	10	126			POSITIVE	B*57:03(1410)	10	183			POSITIVE	DRB1*13:02(2104), DRB3*03:01(2096)	198	216	YES
8001	107	50	191			POSITIVE	B57(9508)	100	327			POSITIVE	DR13(7280), DRB3*03:01(5821)	226	296	YES
8035	107	>48	184			POSITIVE	B*57:03(9637)	>90	326			POSITIVE	DRB1*13:02(4879), DRB3*03:01(5863)	152	188	YES
8050	107	50	167		4265	POSITIVE	B57(7345)	120	242		33377	POSITIVE	DR13(3855), DR52(4781)	29	155	YES
8062	107					NT						NT				
8083	107	90	178			POSITIVE	B*57:03(13555)	150	197			POSITIVE	DRB3*03:01(8073)	331	464	YES
8096	107	20	16.29			NEGATIVE						NT		14.25		NO
8103	107	277	303	1.2		Borderline	B*57:01(1230)	1579	5170	1.7		POSITIVE	B*57:01(1230), DRB1*13(3084), DRB3*01:01(1969), DPB1*04:02(2950)	231	947	NO
8111	107	7	150			POSITIVE	B*57:03(10700)	28	261			POSITIVE	DRB3*03:01(6600); DR13(5200)	201	193	YES
8117	107	40	165			POSITIVE	B57(6254)	60	331			POSITIVE	DR13(4720); DR52(4438)	219	198	YES

Cell #103 HLA Genotype: A*02:01:01-A*03:01:01-B*35:03:01-B*57:03:01-C*04:01:01-C*07:01:02-DRB1*13:02:01-DRB3*03:01:01-DQA1*01:02:01-DQB1*06:04:01-DPB1*04:01:01

Table 7. Individual Flow crossmatch results and DSA reported for Cell #103 vs. Serum #108

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
230	108	2.5	15.8			POSITIVE	A2,B57,Bw4	9	42.8			POSITIVE	DR13,DR52	1.3	6.9	YES
615	108	365	298			POSITIVE	A*02:01(16980), B*57:03(12635), B*35:01(4825)	365	464			POSITIVE	DRB3*03:01(17089), DRB1*13:01(8172)	325	325	YES
774	108	≥ 50	234			POSITIVE	A*02:01(15929.86); B*57:03(12625.53); B*35:01(3681.34)	≥ 120	307			POSITIVE	DRB1*03:01(15795.76); DRB1*13:03(9717.8); DRB1*13:01(6914.9)	234	298	NO
792	108	52	269			POSITIVE	A2(9583), B57(6767)	106	412			POSITIVE	DR52(15968)	251	255	YES
1160	108	50	347			POSITIVE	A2(19396); B57(13376); B35(5152)	70	444			POSITIVE	DR13(13:03)(8772); DR52(17079)	203	231	YES
2400	108	17	267			POSITIVE	A*02:01(21627), B35(6553), B*57:03(16481)	23	364			POSITIVE	DRB1*13:02(10203 -13:01), DRB3*03:01(21282)	40	25	YES
3135	108	1.2	4954	1,4		POSITIVE						NT		3518		YES
3224	108	70	309			POSITIVE	A2(18676); B35(4483); B57(13773); Bw4(13,773)	140	368			POSITIVE	DR13(7806); DR52(18825)	194	218	YES
3753	108	50	233			POSITIVE	A2(14482), B35(3716), B57(12027)	100	333			POSITIVE	DR13(8365), DR52(15131)	234	246	YES
3766	108	93	360	N/A	N/A	POSITIVE	A2(20901), B35(4308), B57(15346)	95	380	N/A	N/A	POSITIVE	DR13(10463), DR52(17426)	224	366	YES
3966	108	20	339			POSITIVE		50	313			POSITIVE		151	334	NO
4345	108					POSITIVE						POSITIVE				NO
4661	108	10	210			POSITIVE	B*35:03(4646), B*57:03(6979)	10	282			POSITIVE	DRB1*13:02(3857), DRB3*03:01(8067)	198	216	YES
8001	108	50	362			POSITIVE	A2(21023), B35(5204), B57(16388)	100	443			POSITIVE	DR13(12895), DRB3*03:01(19995)	226	296	YES
8035	108	>48	344			POSITIVE	A*02:01(17196),B*35 :03(4911),B*57:03(13 606)	>90	430			POSITIVE	DRB1*13:02(6248), DRB3*03:01(5863)	152	188	YES
8050	108	50	347		26921	POSITIVE	A2(13658) B35(2993) B57(12520)	120	367		119989	POSITIVE	DR13(9919) DR52(16915)	29	155	YES
8062	108					NT						NT				

Table 7. Individual Flow crossmatch results and DSA reported for Cell #103 vs. Serum #108 - cont.

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
8083	108	90	297			POSITIVE	A*02:01(22244), B*57:03(16238)	150	320			POSITIVE	DRB3*03:01(21349)	331	464	YES
8096	108	20	44.64			POSITIVE						NT		14.25		NO
8103	108	277	797	1.2		POSITIVE	A*02:01(5984), B*35(3090), B*57(5796)	1579	9015	1.7		POSITIVE	DRB1*13(2386), DRB3*03:01 (7448), DPB1*04:02(15262)	231	947	NO
8111	108	7	74			POSITIVE	A*02:01(20,600); B*57:03(15,000); B35(4200)	28	119			POSITIVE	DRB3*03:01(20,300); DR13(12,700)	201	193	YES
8117	108	40	292			POSITIVE	A2(15842); B57(11111); B35(4736)	60	393			POSITIVE	DR13(6868); DR52(15656)	219	198	YES

Cell #104 HLA Genotype: A*26:01:01-A*30:01:01-B*13:02:01-B*38:01:01-C*06:02:01-C*12:03:01-DRB1*07:01:01-DRB4*01:01:01-DRB4*01:03:01-DQA1*02:01:01-DQB1*02:02-DPB1*11:01:01-DPB1*17:01:01

Table 8. Individual Flow crossmatch results and DSA reported for Cell #104 vs. Serum #105

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA(MFI)	B-Cell PosCut off	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class IIDSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	105	2.8	2.8			Borderline	B13	3.9	8.7			POSITIVE	B13	1.8	1.9	YES
615	105	348	116			POSITIVE	B*13:02(5289)	401	220			POSITIVE	no class II DSA	308	361	YES
774	105	≥ 50	40			NEGATIVE	B*13:02(3905.61)	≥ 120	54			NEGATIVE	no class II DSA	240	357	NO
792	105	52	123			POSITIVE	B13(2953)	106	147			POSITIVE	no class II DSA	220	260	YES
1160	105	50	81			POSITIVE	B13(5162)	70	140			POSITIVE	no class II DSA	218	198	YES
2400	105	17	23			POSITIVE	B*13:02(6181)	23	19			NEGATIVE	no class II DSA	38	41	YES
3135	105	1,2	3278	0,9		NEGATIVE						NT		3483		YES
3224	105	70	40			POSITIVE	B13(5250)	140	73			POSITIVE	no class II DSA	202	245	YES
3753	105	50	49			NEGATIVE	B13(4071)	100	54			NEGATIVE	no class II DSA	232	261	YES
3766	105	93	226	N/A	N/A	POSITIVE	B13(5596)	95	281	N/A	N/A	POSITIVE	no class II DSA	174	296	YES
3966	105	20	106			POSITIVE		50	168			POSITIVE		133	247	NO
4345	105					NEGATIVE						NEGATIVE				NO
4661	105	10	15			POSITIVE	B*13:02(1024)	10	28			POSITIVE	no class II DSA	200	217	YES
8001	105	50	151			POSITIVE	B13(5439)	100	188			POSITIVE	no class II DSA	230	361	YES
8035	105	>48	92			POSITIVE	A*26:01(807), B*13:02(5306), Cw6(944)	>90	93			POSITIVE	no class II DSA	169	232	YES
8050	105	50	40		1211	NEGATIVE	B13(1458)	120	14		3620	NEGATIVE	no class II DSA	33	166	YES
8062	105					NT						NT				
8083	105	90	87			Borderline	B*13:02(6522)	150	164			Borderline	no class II DSA	240	196	YES
8096	105	20	-1.72			NEGATIVE						NT		15.56		NO
8103	105	278	337	1.2		Borderline	B*13:02(666)	3393	3417			Borderline	B*13:02 (666)	1996	232	NO
8111	105	7	5			POSITIVE Based on DSA	B*13:02(4700); A*26:01(2900); B*38:01(1000)	28	20			POSITIVE	no class II DSA	223	208	YES
8117	105	40	99			POSITIVE	B13(4187)	60	187			POSITIVE	no class II DSA	211	173	YES

Cell #104 HLA Genotype: A*26:01:01-A*30:01:01-B*13:02:01-B*38:01:01-C*06:02:01-C*12:03:01-DRB1*07:01:01-DRB4*01:01:01-DRB4*01:03:01-DQA1*02:01:01-DQB1*02:02-DPB1*11:01:01-DPB1*17:01:01

Table 9. Individual Flow crossmatch results and DSA reported for Cell #104 vs. Serum #106

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA(MFI)	B-Cell PosCut off	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class IIDSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	106	2.8	15.1			POSITIVE	A26, B38	3.9	34.2			POSITIVE	DR7, DP17	1.8	1.9	YES
615	106	348	383			POSITIVE	A*26:01(16276), B*38:01(4927), A*30:01(2424)	401	454			POSITIVE	DPB1*17:01(15128), DRB1*07:01(3863)	308	361	YES
774	106	≥ 50	221			POSITIVE	A*26:01(15007.25); B*38:01(3584.59)	≥ 120	252			POSITIVE	DPB1*17:01 (14990.63); DRB1*07:01 (3316.77)	240	357	NO
792	106	52	312			POSITIVE	A26(15423), B38(4725), A30(1906)	106	367			POSITIVE	DP17(14147), DR7(2943)	220	260	YES
1160	106	50	332			POSITIVE	A26(18502); A30(2851); B38(5219)	70	429			POSITIVE	DR7(2508); DP17(14822)	218	198	YES
2400	106	17	252			POSITIVE	A*26:01(19124), A*30:01(2421), B*38:01(5330)	23	289			POSITIVE	DRB1*07:01(4129), DPB1*17:01(18522)	38	41	YES
3135	106	1.2	5100	1.5		POSITIVE						NT		3483		YES
3224	106	70	298			POSITIVE	A26(18 120); A30(6495); B38(5442)	140	308			POSITIVE	DR7(3829); DP17(16724)	202	245	YES
3753	106	50	273			POSITIVE	A26(15686), B38(3978)	100	348			POSITIVE	DR7(3097), DP17(15379)	232	261	YES
3766	106	93	483	N/A	N/A	POSITIVE	A26(19638), A30(2509), B38(5396)	95	471	N/A	N/A	POSITIVE	DR7(3913), DP17(18064)	174	296	YES
3966	106	20	361			POSITIVE		50	407			POSITIVE		133	247	NO
4345	106					POSITIVE						POSITIVE				NO
4661	106	10	262			POSITIVE	A*26:01(7819), B*38:01(883)	10	324			POSITIVE	DRB1*07:01(2762), DQB1*02:02(524), DPB1*17:01(7246)	200	217	YES
8001	106	50	393			POSITIVE	A26(20492), A30(2040), B38(5416)	100	367			POSITIVE	DR7(3528), DPB1*17:01(17436)	230	361	YES
8035	106	>48	342			POSITIVE	A*26:01(17172), A*30:01(1072), B*38:01(4839)	>90	380			POSITIVE	DR7(4154), DP17(16945)	169	232	YES
8050	106	50	367		34417	POSITIVE	A26(13359), A30(3325), B38(3544)	120	326		88262	POSITIVE	DR7(2883), DP17(15531)	33	166	YES
8062	106					NT-						NT				
8083	106	90	402			POSITIVE	A*26:01(25395), B*38:01(8931), A*30:01(4133)	150	542			POSITIVE	DRB1*07:01(4991), DPB1*17:01(18326)	240	196	YES
8096	106	20	41.28			POSITIVE						NT		15.56		NO

Table 9. Individual Flow crossmatch results and DSA reported for Cell #104 vs. Serum #106 - cont.

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA(MFI)	B-Cell PosCut off	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class IIDSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8103	106	278	1775	1.2		POSITIVE	A*26:01(6187), A*30:01(549), B*38:01(877)	3393	8405	1.7		POSITIVE	DRB1*07:01(954), DPB1*04(5484), DPB1*17:01	1996	232	NO
8111	106	7	66			POSITIVE	A*26:01(13700); B*38:01(4500); A*30:01(2000);	28	132			POSITIVE	DPB1*17:01(17500); DRB1*07:01(4500)	223	208	YES
8117	106	40	323			POSITIVE	A26(13397); A30(1531); B38(3553)	60	385			POSITIVE	DR7(2640); DP17(14966)	211	173	YES

Cell #104 HLA Genotype: A*26:01:01-A*30:01:01-B*13:02:01-B*38:01:01-C*06:02:01-C*12:03:01-DRB1*07:01:01-DRB4*01:01:01-DRB4*01:03:01-DQA1*02:01:01-DQB1*02:02-DPB1*11:01:01-DPB1*17:01:01

Table 10. Individual Flow crossmatch results and DSA reported for Cell #104 vs. Serum #107

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA(MFI)	B-Cell PosCut off	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class IIDSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	107	2.8	10.1			POSITIVE	A26, B38, A30	3.9	25.2			POSITIVE	DR7, DP17	1.8	1.9	YES
615	107	348	315			POSITIVE	A*26:01(10591), B*38:01(2235)	401	404			POSITIVE	DPB1*17:01(11584), DRB1*07:01(1713)	308	361	YES
774	107	≥ 50	155			POSITIVE	A*26:01(10558.47); B*38:01(2208.71)	≥ 120	210			POSITIVE	DPB1*17:01 (12495.96); DRB1*07:01 (2114.60)	240	357	NO
792	107	52	251			POSITIVE	A26(7792), B38(1637)	106	325			POSITIVE	DP17(7065)	220	260	YES
1160	107	50	287			POSITIVE	A26(11686); A30(1180); B38(2252)	70	411			POSITIVE	DR7(1361); DP17(10969)	218	198	YES
2400	107	17	177			POSITIVE	A*26:01(13849), B*38:01(3118)	23	211			POSITIVE	DRB1*07:01(2142), DPB1*17:01(15563)	38	41	YES
3135	107	1,2	4062	1,2		POSITIVE						NT		3483		YES
3224	107	70	244			POSITIVE	A26(13380); A30(4015); B38(3128)	140	272			POSITIVE	DR7(2281); DP17(14061)	202	245	YES
3753	107	50	220			POSITIVE	A26(10093), B38(2129)	100	300			POSITIVE	DR7(1499), DP17(11218)	232	261	YES
3766	107	93	413	N/A	N/A	POSITIVE	A26(13571), B38(2666)	95	426	N/A	N/A	POSITIVE	DR7(1772), DP17(13437)	174	296	YES
3966	107	20	280			POSITIVE		50	357			POSITIVE		133	247	NO
4345	107					POSITIVE						NEGATIVE				NO
4661	107	10	200			POSITIVE	A*26:01(4001)	10	263			POSITIVE	DRB1*07:01(1051), DPB1*17:01(3793)	200	217	YES
8001	107	50	340			POSITIVE	A26(14806), A30(1014), B38(3111)	100	333			POSITIVE	DR7(1905), DPB1*17:01(14456)	230	361	YES
8035	107	>48	264			POSITIVE	A*26:01(11794), B*38:01(2619)	>90	319			POSITIVE	DR7(2324), DP17(13335)	169	232	YES
8050	107	50	289		15489	POSITIVE	A26(9512), A30(1772), B38(2250)	120	275		52366	POSITIVE	DR7(1994), DP17(12225)	33	166	YES
8062	107					NT						NT				
8083	107	90	368			POSITIVE	A*26:01(17766), B38:01(4635)	150	504			POSITIVE	DPB1*17:01(15152)	240	196	YES
8096	107	20	22.77			POSITIVE						NT		15.56		NO
8103	107	278	1775	1.2		POSITIVE	A*26:01(3412)	3393	6646	1.7		POSITIVE	DPB1*17:01 (2564)	1996	232	NO
8111	107	7	51			POSITIVE	A*26:01(15100); B*38:01(3700); A*30:01(1300);	28	112			POSITIVE	DPB1*17:01(14000); DRB1*07:01(2500)	223	208	YES
8117	107	40	279			POSITIVE	A26(9529); A30(728); B38(2054)	60	370			POSITIVE	DR7(1460); DP17(11919)	211	173	YES

Cell #104 HLA Genotype: A*26:01:01-A*30:01:01-B*13:02:01-B*38:01:01-C*06:02:01-C*12:03:01-DRB1*07:01:01-DRB4*01:01:01-DRB4*01:03:01-DQA1*02:01:01-DQB1*02:02-DPB1*11:01:01-DPB1*17:01:01

Table 11. Individual Flow crossmatch results and DSA reported for Cell #104 vs. Serum #108

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA(MFI)	B-Cell PosCut off	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class IIDSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
230	108	2.8	5.1			POSITIVE	B13, B38, Bw4	3.9	24.5			POSITIVE	DR7, DQ2, DP17	1.8	1.9	YES
615	108	348	293			POSITIVE	B*13:02(4730), B*38:01(3834)	401	420			POSITIVE	DPB1*17:01(16124), DQB1*02:02(3651), DRB1*07:01(3542)	308	361	YES
774	108	≥ 50	114			POSITIVE	B*13:02(4166.00); B*38:01(2761.53)	≥ 120	196			POSITIVE	DPB1*17:01 (17455.08); DRB1*07:01 (2601.41); DQB1*02:02 (2019.01)	240	357	NO
792	108	52	203			POSITIVE	B13(2270), B38(1812)	106	337			POSITIVE	DP17(15634), DQ2(2870), DR7(2862)	220	260	YES
1160	108	50	184			POSITIVE	B13(5251); B38(4229)	70	376			POSITIVE	DR7(2936); DQ2(3149); DP17(17478)	218	198	YES
2400	108	17	79			POSITIVE	B*13:02(6997), B*38:01(5786)	23	134			POSITIVE	DRB1*07:01(4676), DQB1*02:02(4351), DPB1*17:01(21924)	38	41	YES
3135	108	1,2	4008	1,2		POSITIVE						NT		3483		YES
3224	108	70	162			POSITIVE	B13(4827); B38(3727); Bw4(13773)	140	279			POSITIVE	DR7(3775); DP17(18362); DQ2(9723)	202	245	YES
3753	108	50	89			POSITIVE	B13(3687), B38(2359)	100	226			POSITIVE	DR7(2307), DQ2(4037), DP17(18449)	232	261	YES
3766	108	93	386	N/A	N/A	POSITIVE	B13(4717), B38(3740)	95	438	N/A	N/A	POSITIVE	DR7(3356), DQ2(3278), DP17(18426)	174	296	YES
3966	108	20	244			POSITIVE		50	338			POSITIVE		133	247	NO
4345	108					POSITIVE						POSITIVE				NO
4661	108	10	80			POSITIVE	B*13:02(3410), B*38:01(2852)	10	168			POSITIVE	DRB1*07:01(2179), DQB1*02:02(2076), DPB1*17:01(8022)	200	217	YES
8001	108	50	229			POSITIVE	B13(5754), B38(3522)	100	338			POSITIVE	DR7(3309), DQ2(3112), DPB1*17:01(19200)	230	361	YES
8035	108	>48	251			POSITIVE	B*13:02(3430) B*38:01(2026) possible Bw4(no MFI)	>90	353			POSITIVE	DR7 (3377), DQB1*02:02(3419), DP17 (19273)	169	232	YES

Table 11. Individual Flow crossmatch results and DSA reported for Cell #104 vs. Serum #108 - cont.

Ctr	Serum no	T-Cell Pos cutoff	T Cell MCS	RATIO	MESF	T-Cell RESULT	Class IDSA(MFI)	B-Cell PosCut off	B-cell MCS	RATIO	MESF	B-Cell RESULT	Class IIDSA(MFI)	T-Cell NEG Control MC	B-Cell NEG Control MC	Pronase Treated
8050	108	50	157		4011	POSITIVE	B13(2921), B38(1826)	120	254		42237	POSITIVE	DR7(3103), DQ2(4738), DP17(18475)	33	166	YES
8062	108					NT-						NT				
8083	108	90	255			POSITIVE	B*13:02(3627)	150	433			POSITIVE	DRB1*07:01 (4882), DP17:01 (19947)	240	196	YES
8096	108	20	13.62			NEGATIVE						NT		15.56		NO
8103	108	278	295	1.2		Borderline	B*13:02, B*38:01(1595)	3393	4738	1.7		POSITIVE	DRB1*07:01(1009), DPB1*07:01 (10867), DQB1*02:02 (891)	1996	232	NO
8111	108	7	16			POSITIVE	B*13:02(4600); B*38:01(2900)	28	58			POSITIVE	DPB1*17:01(20100); DQB1*02:02/DQA1*02:01(4300); DRB1*07:01(3900)	223	208	YES
8117	108	40	197			POSITIVE	B13(5161); B38(3940); Bw4	60	351			POSITIVE	DR7(2747); DQ2(2610); DP17(17217)	211	173	YES

Single Antigen

Table 12. Summary of Single Antigen results for Serum #105

Class I							
*** Serum 105 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
B13	19	100%	4187	3945	1623	666	6522
B27	19	100%	6201	5511	1994	1821	8530
B47	19	100%	3132	2798	1097	466	4594
B60	19	100%	5722	4928	2045	1276	7971
B61	19	100%	4858	4418	1966	404	7422
B7	19	100%	11000	9565	3405	2980	14335
B42	16	84%	2561	2277	959	353	4117
B48	16	84%	4659	4405	1434	1167	6489
B67	15	78%	2340	2150	872	537	3861
B73	15	78%	2561	2640	684	992	3834
B81	15	78%	9527	8297	3217	2403	13755
B55	14	73%	2188	2096	857	443	3753
A66	11	57%	4393	4795	2769	268	9560
B56	11	57%	1697	1602	702	349	2825
A6602	10	52%	6133	5564	1805	1814	7533
Cw2	8	42%	2005	2035	312	1534	2404
B2708	7	36%	6731	5312	2118	1821	7731
B8101	6	31%	9772	7656	4035	1645	11457
B82	6	31%	1484	1552	424	931	2348
B54	4	21%	660	750	303	432	1251
Cw5	4	21%	1204	1375	404	1031	2064
B703	3	15%	3007	3552	1354	2235	5414
B8201	3	15%	1538	1687	449	1228	2297

Class II							
*** Serum 105 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DQ4	19	100%	10895	9398	3255	2231	13895
DQ5	19	100%	23900	21781	5485	9553	27688
DQ6	19	100%	23594	21897	4715	13182	27607
DR15	19	100%	20410	19602	3647	9893	23916
DR16	19	100%	15891	15560	3448	6536	20581
DR51	19	100%	15822	15164	3780	5560	20770
DQ8	17	89%	6020	5438	1596	1605	7814
DQ9	17	89%	6658	5992	2069	1246	9389
DQA1*01	4	21%	22797	21625	5292	13199	27709

Blue = DSA against cell #103 only
Gold = DSA against cell #104 only
Green = DSA against cell #103 and #104

Table 13. Summary of Single Antigen results for Serum #106

Class I							
*** Serum 106 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A26	19	100%	17000	15190	5350	3650	25395
A29	19	100%	7285	6504	2949	1109	13640
A34	19	100%	9061	8578	4025	1824	16837
B38	19	100%	4725	4212	1874	877	8931
B54	19	100%	6800	5862	2707	579	11362
B57	19	100%	12000	10867	4631	2427	20357
B58	19	100%	10000	9094	4063	1885	17541
B63	19	100%	9895	8861	3844	1608	16919
A25	18	94%	16942	15987	5018	5524	25245
A30	18	94%	4816	5005	2600	549	11320
A43	18	94%	11707	10811	3848	3692	19146
B55	18	94%	4911	4462	1915	629	8533
B67	18	94%	2868	2712	1251	371	5775
A33	17	89%	3536	3091	1548	874	6448
A80	17	89%	3900	3719	1368	774	6962
A1	16	84%	2580	2419	1054	537	4901
B39	16	84%	4928	4631	1835	899	9171
A11	15	78%	6489	6110	3047	1015	13124
A36	15	78%	2224	2202	890	721	4358
A68	15	78%	3237	3017	1464	696	5929
B56	15	78%	3282	3628	878	2711	5740
A66	14	73%	11606	12474	5958	2259	24484
B41	13	68%	2100	2141	604	1296	3893
B42	13	68%	2098	2032	660	1241	3955
A31	12	63%	2265	2240	895	394	4280
A69	10	52%	2819	2775	944	1319	4882
A74	8	42%	1634	1699	552	1015	2839
B59	8	42%	1515	1595	406	1165	2477
A6601	6	31%	16701	15189	3957	7143	19462
A6602	6	31%	5103	4492	1534	1380	5989
B73	6	31%	1374	1518	364	1132	2272
B8	6	31%	1276	1390	396	977	2068
A1101	5	26%	6357	5164	1666	2604	6615
A1102	5	26%	7460	5969	2274	2013	7885
B3901	5	26%	1182	2853	2108	1079	5533
Cw7	5	26%	1339	1402	400	973	2063
Cw18	3	15%	1160	1142	174	921	1346

Class II							
*** Serum 106 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DPw2	19	100%	16266	15365	3903	5584	20165
DPw3	19	100%	16553	15816	3938	6506	20135
DR10	19	100%	7325	6841	2105	2222	9762
DR11	19	100%	13837	13378	2398	5589	16912
DR12	19	100%	3400	3456	1060	1124	6094
DR13	19	100%	7521	7732	2360	2330	11989
DR14	19	100%	6383	6081	1509	2742	8925
DR17	19	100%	10610	9880	2570	3195	13810
DR18	19	100%	8640	8383	1830	3463	11344
DR52	19	100%	9967	10087	2872	4405	15400
DR7	19	100%	3317	3495	1260	954	7470
DP18	18	94%	14671	14022	3041	5422	17167
DPw6	18	94%	15287	14885	3096	5287	18753
DP14	17	89%	15647	15109	3468	6108	19019
DP28	17	89%	15077	15045	3008	6168	18318
DR9	17	89%	3920	4007	1482	1268	8224
DP17	16	84%	15455	15020	3654	4929	18537
DP9	16	84%	16942	16490	3608	6278	20519
DQ6	16	84%	5153	5304	1779	1798	8230
DQ7	16	84%	2797	3204	2071	1041	10581
DP10	15	78%	12284	12604	1279	11158	15428
DP20	15	78%	16963	17075	1334	14762	19332
DQ9	15	78%	2079	2297	1170	946	6069
DQ8	14	73%	1999	2124	972	1059	5192
DP402	10	52%	14989	13619	3279	5484	16397
DPw4	10	52%	15623	14050	4346	5484	19041
DPw1	7	36%	1703	2470	1762	1315	6672
DQA1*05	5	26%	2660	2523	813	1010	3398
DQ2	3	15%	1312	2661	2045	1121	5551
DQA1*01	3	15%	4586	3841	1896	1238	5700
DQA1*06	3	15%	2785	2835	296	2500	3220
DR1403	3	15%	4954	4508	1672	2275	6297
DR4	3	15%	820	3268	3504	761	8224

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #104

Table 14. Summary of Single Antigen results for Serum #107

Class I							
*** Serum 107 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A25	19	100%	11733	10321	4498	971	17914
A26	19	100%	11686	10216	4232	1056	17766
A29	19	100%	3960	3552	1805	297	7858
A34	19	100%	5519	4954	2577	509	10269
B57	19	100%	7500	6704	3308	671	13555
B58	19	100%	6204	5380	2642	787	10500
B63	19	100%	6000	5196	2502	486	9870
A43	18	94%	6965	6682	2728	1913	12800
B38	17	89%	2400	2420	912	543	4635
B54	17	89%	3864	3579	1389	174	6012
A11	16	84%	3630	3334	1748	291	7400
A30	16	84%	3251	3148	1206	564	6020
B39	16	84%	2534	2484	1005	246	4752
B55	16	84%	2708	2609	861	238	4478
A66	15	78%	7225	8307	4495	640	18243
B56	12	63%	1753	1707	571	283	2622
A80	11	57%	2192	2119	476	1529	3203
A33	9	47%	2010	1874	655	576	2816
A68	9	47%	2061	2028	645	598	2984
B67	9	47%	1651	1739	419	1267	2740
A1	7	36%	1581	1512	414	904	2325
A6601	6	31%	12246	10641	3126	3929	12708
A6602	6	31%	2908	2506	830	756	3123
A69	6	31%	1265	1205	616	239	2164
B42	6	31%	953	921	206	563	1155
A1101	5	26%	2986	2915	982	1176	3895
A1102	5	26%	3573	3460	1388	942	4875
A31	5	26%	1065	887	385	141	1225
A36	5	26%	1194	1098	316	497	1418
B41	5	26%	997	1040	102	916	1200
B3901	4	21%	1661	1778	1192	591	3200
B59	3	15%	688	535	269	157	761
B8	3	15%	580	532	208	258	760

Class II							
*** Serum 107 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DPw2	19	100%	12639	10867	4258	862	15510
DPw3	19	100%	13183	11623	4428	854	16548
DR11	19	100%	10468	9346	3179	1676	12958
DR13	19	100%	5416	4740	2120	628	7794
DR14	19	100%	3241	3264	1338	406	5365
DR17	19	100%	6700	5879	2358	678	9326
DR52	19	100%	6321	6117	2530	844	10576
DP14	18	94%	12480	11210	3943	1047	15219
DP17	18	94%	12325	10951	4189	1294	15576
DP18	18	94%	10781	9010	3945	1000	13644
DPw6	18	94%	11995	10921	3333	3098	14804
DR10	18	94%	4472	4088	1610	574	6129
DR18	18	94%	5565	4992	1696	805	7727
DP28	17	89%	11234	10868	2995	3370	14868
DP9	17	89%	13768	12705	3592	3268	16671
DR7	16	84%	1950	1789	587	689	2884
DP10	15	78%	8890	9093	1295	5900	11110
DP20	15	78%	13547	13331	1927	7948	16150
DQ6	15	78%	2738	2761	1107	973	4876
DR12	15	78%	2025	1830	600	707	2748
DP402	12	63%	11359	10328	2925	2950	13257
DR9	12	63%	2326	2123	791	671	3504
DQ7	9	47%	1824	1748	490	721	2459
DPw4	8	42%	9298	8666	5073	729	14325
DQA1*05	6	31%	1413	1388	558	314	2184
DQ8	5	26%	937	973	189	718	1257
DQ9	5	26%	1005	1058	255	686	1449
DQA1*06	4	21%	1771	1716	203	1402	1922
DQA1*01	3	15%	2435	2179	955	902	3200
DQA1*03	3	15%	1030	1069	85	991	1187
DR1403	3	15%	1800	1677	535	970	2263

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #104

Table 15. Summary of Single Antigen results for Serum #108

Class I							
*** Serum 108 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
A2	19	100%	15930	15584	4821	6266	22244
A68	19	100%	10012	10537	3249	4541	15855
A69	19	100%	10692	10130	3992	3039	16865
B18	19	100%	6233	6353	1316	3588	9022
B35	19	100%	3716	3983	1099	1579	6613
B45	19	100%	4301	4457	1228	2323	7677
B46	19	100%	3348	3559	1233	1519	6707
B50	19	100%	4091	4442	1756	2250	10588
B54	19	100%	4289	4060	1038	1708	6623
B55	19	100%	3810	4057	959	2516	6307
B56	19	100%	3932	3985	1147	1666	6859
B57	19	100%	12520	12064	3281	6199	16388
B58	19	100%	11170	10764	2995	5728	14518
B62	19	100%	3759	3932	1031	2229	6360
B67	19	100%	3440	3638	1364	1861	7380
B71	19	100%	3908	4068	1209	1383	6654
B72	19	100%	4336	4574	1097	2426	7157
B75	19	100%	3677	3899	1149	2058	6474
B76	19	100%	3582	3870	1256	2184	7147
B13	18	94%	3694	4096	1212	2037	6649
B27	18	94%	4723	4627	1061	2670	7096
B37	18	94%	3313	3479	970	1794	6106
B38	18	94%	2935	3077	1038	1595	5846
B44	18	94%	4323	4389	990	2952	6772
B47	18	94%	3531	3614	1177	1237	6144
B49	18	94%	4008	3927	1147	1683	6233
B51	18	94%	5332	5173	1280	2466	7293
B52	18	94%	4254	4421	1058	2025	6768
B59	18	94%	3372	3427	1098	1227	5979
B63	18	94%	3350	3320	889	1877	5671
B64	18	94%	5979	6102	1414	3481	9283
B65	18	94%	6334	6473	1356	3809	9248
B39	17	89%	3609	3755	1155	1930	6411
B78	17	89%	4375	4623	1012	2891	7171
B53	16	84%	3864	3762	964	2460	6164
B77	16	84%	3619	3850	968	2309	6312
B82	10	52%	2628	3329	2243	1247	9492

Class II							
*** Serum 108 ***							
19 typing Labs							
Antigen	No.Labs	Consensus	Median	Mean	Std Dev	Min	Max
DPw2	19	100%	22244	21226	3399	11836	25479
DPw3	19	100%	18959	18089	3617	7945	22390
DQ2	19	100%	7061	6795	3021	891	11654
DR11	19	100%	19506	19510	2065	14195	22805
DR13	19	100%	9718	9009	2405	2386	12895
DR14	19	100%	9300	9015	2105	3243	13037
DR17	19	100%	18161	17415	3828	7575	22252
DR18	19	100%	15619	15022	2947	6199	18763
DR52	19	100%	17000	16428	3507	8076	21349
DR7	19	100%	3103	3439	1618	1004	9317
DP17	18	94%	18071	17143	3322	8022	21946
DP18	18	94%	21527	20832	2379	15259	23544
DPw6	18	94%	17699	17126	2365	11262	20960
DP14	17	89%	18084	17392	2558	11988	20439
DP28	17	89%	21253	21002	2390	14190	23619
DP9	16	84%	20022	19105	3153	10820	23034
DP10	15	78%	19810	19496	1273	16318	21201
DP20	15	78%	19865	19939	1524	16859	23066
DP402	13	68%	21447	20666	2865	14185	24081
DPw4	7	36%	19517	18597	4152	10184	22484
DQ7	3	15%	888	4001	4648	544	10571
DQA1*05	3	15%	10223	11037	2711	8200	14689
DR1403	3	15%	3964	4738	2228	2481	7770

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #104

Table 15. Summary of Single Antigen results for Serum #108 - cont.

Class I							
*** Serum 108 ***							
19 typing Labs							
A24	8	42%	1741	1703	549	666	2429
Cw5	8	42%	1767	1782	427	1182	2492
B2708	7	36%	4938	4831	607	3800	5537
A203	5	26%	8501	10544	4722	5205	16366
B73	5	26%	1049	2735	3626	559	9976
A23	4	21%	1108	1101	248	757	1434
B3901	4	21%	3791	3554	630	2509	4126
A2403	3	15%	1507	1293	370	773	1599
A33	3	15%	1102	1509	904	664	2762
B7801	3	15%	4963	4490	708	3489	5019
B8201	3	15%	2184	1821	608	965	2314
Bw4	3	15%	6032	8268	3915	5000	13773

Table 16a. Individual laboratory results for Serum #105 - class I by One Lambda Single Antigen

	**** Serum 105 ****																						
Ctr	B13	B27	B2708	B47	B60	B61	B7	B42	B48	B67	B73	B81	B8101	B55	A66	A6602	B56	Cw2	B82	B54	Cw5	Other	
54	4819	6201	6731	2940	6075	5657	11791	2650	4584	2537	2521	9930		2257		6212	1697						One Lambda
230	3738	5949		2826	5722	4596	11293	2174	4550		2373	9527				5880							One Lambda
774	3906	5222		2608	4915	4175	9807		3960		2127	8042			4274								One Lambda
792	2953	3794		1831	2903	3605	6674	1600	2575	1716	1692	6524		1752	4393								One Lambda
1160	5162	6615		3534	6310	5963	10981	2387	5005	2226	3225	9828		1957		6456	1709	2000	1430	658	1031		One Lambda
2400	5358	7617		4219	7386	6076	12911	2768	6240	2509	3834	11845		2354	7629			2404					One Lambda
3224	5249	7054	6780	3132	5147	5919	11245	2623	4324	2340	2970		9543	2176		6708	1696	1534			1215	B8201	One Lambda
3753	4071	6343		3169	5765	4722	11095	2636	4733	2403	2458	9724		2312		5684	1775	2001	1686				One Lambda
3766	5596	7731	7731	3843	6809	6464	13213	2921	5875	2564	3217	11457	11457	2537	7533	7533	1805	2008	1538			B8201	One Lambda
8001	5439	7347		3554	6622	5917	12518	2622	5115	2324	2561	10785		2137	7156		1654	1619	1382				One Lambda
8035	4517	7209		3512	6726	5588	12591	3577	5319	3382	3250		10889	3753		6054	2516	2394		1251		B8201	One Lambda
8050	1458	2850		1200	2645	1953	6067	1059	1913	1035		5320			1660								One Lambda
8079	5000	6400	6900	3300	6100	5500	11000	2500	5000	2400	2600		10000	2200		6900							One Lambda
8083	6522	8530		4594	7971	7422	14335	4117	6489	3861	3280	13755		3412	9560		2825	2327	2348				One Lambda
8096	3410	2486		466	1276	404	3892	353		537		2748		443	268		349			662	2064	A11,A2,B15,B62 >	One Lambda
8117	4187	5387		2491	5095	4858	8995	1746	3646	1717	2500	7385		1407	4592		1049		931	432	1192		One Lambda
Avg	4462	6046	7036	2951	5467	4926	10526	2382	4622	2254	2758	8990	10472	2207	5229	6428	1708	2036	1553	751	1376		
Std Dev.S	1219	1736	469	1070	1807	1751	2837	929	1246	840	562	2952	862	817	3019	605	683	333	465	350	466		
MFI %CV	27%	29%	7%	36%	33%	36%	27%	39%	27%	37%	20%	33%	8%	37%	58%	9%	40%	16%	30%	47%	34%		

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 16b. Individual laboratory results for Serum #105 - class I by Lifecodes Single Antigen

	**** Serum 105 ****																						
Ctr	B13	B27	B2708	B47	B60	B61	B7	B42	B48	B67	B73	B81	B8101	B55	A66	A6602	B56	Cw2	B82	B54	Cw5	Other	
4661	1024	2655	2020	1750	1584	3960									2403		2939	1645				B703	Lifecodes
8029	1897	3515	3258	2906	2593	6389	707	1167	708	992	5190	648	3870	549			4285					B703	Lifecodes
8103	666	1821	674	1511	963	2980					2403		1814		1814		1821	2403				B40,B703	Lifecodes
Avg	1196	2664	1984	2056	1713	4443	-	-	-	-	3797	-	2842	-	2109	-	3015	2024	-	-	-		
Std Dev.S	633	847	1292	746	823	1755	-	-	-	-	1971	-	1454	-	416	-	1234	536	-	-	-		
MFI %CV	53%	32%	65%	36%	48%	40%	-	-	-	-	52%	-	51%	-	20%	-	41%	26%	-	-	-		

Table 17a. Individual laboratory results for Serum #106 - class I by One Lambda Single Antigen

	**** Serum 106 ****																									
Ctr	A26	A29	A34	B38	B54	B57	B58	B63	A25	A30	A43	B55	B67	A33	A80	A1	B39	B3901	A11	A1101	A1102	A36	A68	B56	A66	
54	18215	8116	11330	5150	6974	13864	11116	10458	19271	6806	12138	4980	3451	4091	4040	2862	5510			6502	7885	2514	3624	3227		
230	17074	7285	9061	4625	6862	12887	10822	10487	17962	4126	11883	4754	2936	3536	3633	2532	5003		6489			2224	3237	3282	10880	
774	15007	6718	8683	3585	6192	11422	9206	9473	15234	4247	9577	4842	2317		3878		3819			3746	4802			3822		
792	15423	7178	9909	4725	6639	11688	9730	9888	16541	5972	11534	4543	2756	3111	3450	2560	4852		7159			2218	2857	2914	15511	
1160	18502	8399	11800	5219	7673	12474	11071	10651	18474	7047	12898	5685	3517	4907	4550	3349	5318		8394			2978	4479	3906	17828	
2400	19152	7656	10481	5357	7328	12522	11283	10105	19565	4458	13286	5248	3731	4077	4131	3106	5815		8271			2904	4060	3266	12331	
3224	18092	7634	10709	5442	6974	13004	10314	9895	18120	6495	11879	5109	3412	4169	3545	2878		5533		6615	7460	2530	3850	2981		
3753	15686	6325	6998	3978	6368	11796	9886	9716	15907	4477	9860	4513	2399	1558	3914	1611	4062		4703			1258	1096	3315	9301	
3766	19638	8057	12130	5396	7883	13916	12538	12031	19644	7064	14559	5988	3203	4259	4337	2984	5333	5333	7687	6357	7687	2593	4103	3805	19462	
8001	20492	9109	12577	5416	7426	15016	12214	11936	20900	7454	14684	5119	3292	3632	4467	2878	5635		8850			2359	3054	2988	19130	
8035	17172	7550	8260	4838	7295	13831	11784	11511	17342	3098	11397	5776	3074	1642	4761	1881	5192		4994			1329	1120	4280	10351	
8050	13359	4864	5609	3544	5573	10406	8662	8636	14007	3325	8524	3902	2188	1385	2906	1162	3798		3973					2797	7711	
8079	17000	7900	11000	4800	6800	12000	10000	10000	16000	6300	12000	5000	2800	3700	3900	2600	4600		7000			2200	3600	5400		
8083	25395	13640	16837	8931	11362	20357	17541	16919	25245	11320	19146	8533	5775	6448	6962	4901	9171		13124			4358	5929	5740	24484	
8096	3650	1109	1967	2629	579	2427	2507	1608		1608		907	371				899		1015						2259	
8117	13397	5910	8999	3553	5432	9707	8029	7459	14686	5155	9421	4042	2482	3112	3177	2229	4022		6060			2012	2791	2711	12792	
Avg	16703	7341	9772	4824	6710	12332	10419	10048	17927	5560	12186	4934	2982	3545	4110	2681	4869	5433	6748	5805	6959	2421	3369	3629	13503	
Std Dev.S	4549	2504	3300	1387	2102	3558	3010	3033	2845	2271	2626	1505	1089	1370	940	881	1699	141	2881	1377	1448	774	1294	908	6081	
MFI %CV	27%	34%	34%	29%	31%	29%	29%	30%	16%	41%	22%	30%	37%	39%	23%	33%	35%	3%	43%	24%	21%	32%	38%	25%	45%	

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 17b. Individual laboratory results for Serum #106 - class I by Lifecodes Single Antigen

	**** Serum 106 ****																								
Ctr	A26	A29	A34	B38	B54	B57	B58	B63	A25	A30	A43	B55	B67	A33	A80	A1	B39	B3901	A11	A1101	A1102	A36	A68	B56	A66
4661	7819	2402	2460	883	1101	3190	1991	2600	7154		4150			950				1138		2604	2013				
8029	7352	1984	2359	1096	1470	3239	2224	2619	6192	589	3984	750	568	1103	774	634		1182	2163			834	768		7086
8103	6187	1741	1824	877	1450	2730	1885	2382	5524	549	3692	629	556	874	811	537	1079	1079	1773			721	696		5514
Avg	7119	2042	2214	952	1340	3053	2033	2534	6290	569	3942	690	562	976	793	-	-		1968	-	-	778	732	-	6300
Std Dev.S	841	334	342	125	208	281	173	132	819	28	232	86	8	117	26	-	-		276	-	-	80	51	-	1112
MFI %CV	12%	16%	15%	13%	15%	9%	9%	5%	13%	5%	6%	12%	2%	12%	3%	-	-		14%	-	-	10%	7%	-	18%

Table 17a. Individual laboratory results for Serum #106 - class I by One Lambda Single Antigen, cont.

**** Serum 106 ****													
Ctr	A6601	A6602	B41	B42	A31	A69	A74	B59	B73	B8	Cw7	Other	
54	17285	5256	2249	2123	2317	2186	1617	1510					One Lambda
230													One Lambda
774	13845	3878											One Lambda
792			1860	1715	1941	1950							One Lambda
1160			2385	2299	3120	3319	2233	1944	1609	1722	1339	B64,B65,B18,B37 >	One Lambda
2400			2532	2208	2566	3423							One Lambda
3224	16402	4949	2233	2318	2229	2937	1650	1620	1349	1420	1036	Cw18	One Lambda
3753			1529	1538									One Lambda
3766	19462	5989	2178	2150	2474	2987	1685	1520					One Lambda
8001			2100	2098	2113	2047	1394	1304	1362	1131			One Lambda
8035			1885	1963	1339		1015	1165	1385	977	973	Cw18	One Lambda
8050			1296	1241									One Lambda
8079	17000	5500	2000		2300	2700							One Lambda
8083			3893	3955	4280	4882	2839	2477	2272	2068	2063		One Lambda
8096				1349	394						1601	Cw6,B60,B48,B62 >	One Lambda
8117			1704	1469	1816	1319	1166	1226	1132	1026			One Lambda
Avg	16799	5114	2142	2033	2241	2775	1700	1596	1518	1391	1402		
Std Dev.S	2016	789	629	687	935	995	590	434	399	434	447		
MFI %CV	12%	15%	29%	34%	42%	36%	35%	27%	26%	31%	32%		

Table 17b. Individual laboratory results for Serum #106 - class I by Lifecodes Single Antigen, cont.

**** Serum 106 ****													
Ctr	A6601	A6602	B41	B42	A31	A69	A74	B59	B73	B8	Cw7	Other	
4661	7143	1380											Lifecodes
8029													Lifecodes
8103												B15	Lifecodes
Avg	-	-	-	-	-	-	-	-	-	-	-		
Std Dev.S	-	-	-	-	-	-	-	-	-	-	-		
MFI %CV	-	-	-	-	-	-	-	-	-	-	-		

Table 18a. Individual laboratory results for Serum #107 - class I by One Lambda Single Antigen

**** Serum 107 ****																											
Ctr	A25	A26	A29	A34	B57	B58	B63	A43	B38	B54	A11	A1101	A1102	A30	B39	B3901	B55	A66	A6601	A6602	B56	A80	A33	A68	B67	A1	A69
54	14060	12948	5139	7233	9322	7367	6934	8118	3006	4338	4580	3806	4580	4179	3159		2943	12708	12708	3123	1911	2298	2313	2061	1932	1623	
230	12696	11933	4089	5519	8245	6725	6615	7441	2633	3837	3687			3398	2743		2625	7225									
774	12024	10558	4123	5641	8419	6372	6084	6514	2209	4031		2716	3332	2699	2555		2885		10133	2278	2122	2192					
792	6887	7792	2509	3653	4627	3834	3632	4489	1637	2079	2454			1991	1682		1586	6461									
1160	11277	11686	3812	5854	6485	5799	5079	7093	2252	3864	4128			3104	2513		2500	10558			1663	1602	1971	2177	1549	1401	1465
2400	13735	13865	4421	6287	7758	6498	6237	8650	3134	4539	4787			3748	3167		2902	8484					2816	2740			
3224	13830	13380	5108	7308	9056	7186	6555	8468	3127	4647		3895	4875	4015		3200	3032		12491	3068	1956	2238	2289	2265	1924	1602	1558
3753	9775	10093	3381	3894	6589	5500	5433	6035	2129	3251	2320			2107	2152		2515	5705			1635	1879			1267		
3766	12961	13571	3960	6949	8504	6559	6748	8896	2666	4244	3573	2986	3573	3632	2716	2716	3066	12585	12585	2916	1843	1892	2137	2001			
8001	14904	14806	5312	7679	9508	7531	7596	9794	3111	4325	5225			4169	3186		2790	14047			1569	2319	2010	1760	1803	1581	1064
8035	11733	11794	4308	4846	9187	7559	7462	6837	2619	4449	2582			2744	2891		3332	6807			2308	2581	967		1651	904	
8050	10818	9512	2878	3463	7345	6204	5955	5511	2250	3221	2435			1772	2456		2067	5413			1212	1585			1369		
8079	12000	12000	4200	6400	7500	6000	6000	7600	2400	3800	4100			3400	2500		2600		12000	2900							
8083	17914	17766	7858	10269	13555	10500	9870	12800	4635	6012	7400			6020	4752		4478	18243			2622	3203		2984	2740	2325	2164
8096	971	1056	297	509	671	787	486		747	174	291			564	246		238	640			283			598			239
8117	10504	9529	3276	5399	6245	5028	4525	5841	2054	3282	3808			2836	2433		2189	8802			1366	1529	1790	1672	1424	1149	745
Avg	11631	11393	4042	5681	7689	6216	5951	7606	2538	3756	3669	3351	4090	3149	2610	2958	2609	9052	11983	2857	1708	2120	2037	2029	1740	1512	1206
Std Dev.																											
S	3743	3648	1583	2197	2702	2032	2019	2023	832	1275	1670	589	752	1246	940	342	890	4548	1069	338	596	499	530	684	444	447	675
MFI																											
%CV	32%	32%	39%	39%	35%	33%	34%	27%	33%	34%	46%	18%	18%	40%	36%	12%	34%	50%	9%	12%	35%	24%	26%	34%	26%	30%	56%

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 18b. Individual laboratory results for Serum #107 - class I by Lifecodes Single Antigen

**** Serum 107 ****																											
Ctr	A25	A26	A29	A34	B57	B58	B63	A43	B38	B54	A11	A1101	A1102	A30	B39	B3901	B55	A66	A6601	A6602	B56	A80	A33	A68	B67	A1	A69
4661	3702	4001	1073	1226	1411	806	1173	2044				1176	942						3929	756							
8029	3618	4420	963	1257	1751	1172	1344	2249	543	763	1130					591		4096					576				
8103	2702	3412	792	746	1203	807	998	1913			848				605	605		2842									
Avg	3341	3944	943	1076	1455	928	1172	2069	-	-	989	-	-	-	-	598	-	3469	-	-	-	-	-	-	-	-	-
Std Dev.																											
S	555	506	142	286	277	211	173	169	-	-	199	-	-	-	-	10	-	887	-	-	-	-	-	-	-	-	-
MFI																											
%CV	17%	13%	15%	27%	19%	23%	15%	8%	-	-	20%	-	-	-	-	2%	-	26%	-	-	-	-	-	-	-	-	-

Table 18a. Individual laboratory results for Serum #107 - class I by One Lambda Single Antigen, cont.

	**** Serum 107 ****					
Ctr	B42	A31	A36	B41	Other	
54						One Lambda
230						One Lambda
774						One Lambda
792						One Lambda
1160	881	1074	1194	997	A74,B64,B65,B18 >	One Lambda
2400						One Lambda
3224	1155	1225	1418	1200		One Lambda
3753						One Lambda
3766						One Lambda
8001	1122	1065	1256	1114		One Lambda
8035	1025			977		One Lambda
8050						One Lambda
8079						One Lambda
8083						One Lambda
8096	563	141	497		Cw4,A24,A2,B60 >	One Lambda
8117	784	932	1127	916	A74,B59,B73,B8	One Lambda
Avg	922	887	1098	1041		
Std Dev.						
S	226	430	353	114		
MFI						
%CV	24%	48%	32%	11%		

Table 18b. Individual laboratory results for Serum #107 - class I by Lifecodes Single Antigen, cont.

	**** Serum 107 ****					
Ctr	B42	A31	A36	B41	Other	
4661						Lifecodes
8029						Lifecodes
8103					B15	Lifecodes
Avg	-	-	-	-		
Std Dev.						
S	-	-	-	-		
MFI						
%CV	-	-	-	-		

Table 19a. Individual laboratory results for Serum #108 - class I by One Lambda Single Antigen

	**** Serum 108 ****																										
Ctr	A2	A68	A69	B18	B35	B45	B46	B50	B54	B55	B56	B57	B58	B62	B67	B71	B72	B75	B76	B13	B27	B2708	B37	B38	B44	B47	B49
54	19777	13638	12397	7835	4775	5715	4580	5013	5013	5029	4950	15665	13309	4962	4457	5274	5672	5031	4763	5539	5447	5514	4306	3802	5471	5251	5002
230	17002	11272	11336	6263	3648	4310	3469	3717	3749	3721	3667	12297	11706	3564	3212	3821	4161	3024	3582								
774	15930	9697	8419	6233	3681	4301	3348	3886	3721	3810	3932	12626	10850	3759	3440	3908	4336	3677	3622	4166	4213	4246	3458	2762	4086	3137	3800
792	9619	6605	6245	4059	2429	2323	1799	2250	1708	2516	2617	7186	5970	2229	1928	2358	2426	2058	2184	2270	2670		1794	1812	2952	2122	2215
1160	19396	12680	12807	7618	5152	5766	4964	4899	4694	5131	5214	13376	12528	5230	4340	4772	5813	5482	4869	5251	5621		4121	4228	4989	4545	5158
2400	20812	13689	14639	9022	6613	7677	6707	6634	6623	6307	6859	16195	14277	6360	6219	6654	7157	6474	6258	6649	7096		6106	5846	6772	6144	6233
3224	18675	12615	12684	7362	4483	4682	4207	4428	4404	4711	4361	13773	12665	4555	3991	4631	5162	4509	3385	4826	4806	4938	3685	3726	4676	3857	4485
3753	14482	9387	9863	5927	3716	4259	3305	3614	3562	3600	3583	12027	10770	3391	2833	3592	4032	3054	3134	3687	4050		3120	2359	3673	3204	3665
3766	20901	14686	15276	7131	4308	4706	3916	4334	4289	4637	4252	15346	13753	4173	3755	4690	4627	4577	3962	4714	4831	4585	3921	3740	4509	3989	4548
8001	21023	14855	14316	8135	5204	5946	4700	5315	5185	5116	5258	16388	14518	4839	4061	5333	5837	5135	4494	5754	6156		4370	3522	5803	4500	5043
8035	15749	10012	10692	6007	3261	3771	2845	3328	3249	3363	3284	13341	12295	2955	2351	3211	3624	2609	2801	3244	3534		2639	2026	3173	2603	3101
8050	13658	9299	8238	5745	2993	3704	2545	3152	3104	3091	3159	12520	11170	2888	2386	3159	3659	2267	2764	2921	3460		2883	1826	3112	2525	3090
8079	18000	12000	13000	5900	3500	3900	3200	3500	3500	3400	3500	12000	11000	3300	2800	3400	3900	3500	3100	3700	3900	3800	2900	2700	3700	3000	3300
8083	22244	15855	16865	6647	3636	3909	3136	3506	3378	3379	3384	16238	14274	3172	2448	3381	4143	3441	2998	3627	4111		2710	2243	3927	3188	3249
8096	8001	6501	3926	3588	1579	3087	4382	#####	4342	3178	1666	6872	6237	3346	7380	1383	2860	3122	7147	3266	4639		3167	3017	4137	1237	1683
8117	15842	9923	8594	6901	4736	5282	4436	5242	4964	4935	5058	11111	10443	4835	4507	5036	5481	4844	4863	5161	5306		4387	3940	5132	4179	5047
Avg	16944	11420	11206	6523	3982	4584	3846	4588	4093	4120	4047	12935	11610	3972	3757	4038	4556	3925	3995	4318	4656	4617	3571	3170	4407	3565	3975
Std Dev.S	4063	2814	3488	1401	1201	1280	1154	1918	1112	1019	1236	2867	2536	1078	1456	1286	1228	1262	1338	1215	1143	655	1027	1099	1082	1261	1237
MFI %CV	24%	25%	31%	21%	30%	28%	30%	42%	27%	25%	31%	22%	22%	27%	39%	32%	27%	32%	33%	28%	25%	14%	29%	35%	25%	35%	31%

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 19a. Individual laboratory results for Serum #108 - class I by Lifecodes Single Antigen

	**** Serum 108 ****																										
Ctr	A2	A68	A69	B18	B35	B45	B46	B50	B54	B55	B56	B57	B58	B62	B67	B71	B72	B75	B76	B13	B27	B2708	B37	B38	B44	B47	B49
4661	9002	6057	4769	4878	4647	4675	1964	4168	4494	4328	4276	6979	5728	4327	3298	4878	4897	4144	3141	3410	5183	2725	2852	4829	4453	4215	3967
8029	9734	6891	5370	5575	4236	4125	2606	4091	4389	4089	4099	9091	7228	4430	3872	4973	4802	4255	4111	3519	4897	3966	3395	4668	4554	4338	4608
8103	6266	4541	3039	5883	3090	2546	1519	2747	2784	2742	2596	6199	5796	2405	1861	2840	4323	2887	2360	2037	3368	2373	1595	3397	2578	2527	2466
Avg	8334	5830	4393	5445	3991	3782	2030	3669	3889	3720	3657	7423	6251	3721	3010	4230	4674	3762	3204	2989	4483	3021	2614	4298	3862	3693	3680
Std																											
Dev.S	1828	1191	1210	515	807	1105	546	799	958	855	923	1496	847	1141	1036	1205	308	760	877	826	976	837	923	784	1113	1012	1099
MFI																											
%CV	22%	20%	28%	9%	20%	29%	27%	22%	25%	23%	25%	20%	14%	31%	34%	28%	7%	20%	27%	28%	22%	28%	35%	18%	29%	27%	30%

Table 19a. Individual laboratory results for Serum #108 - class I by One Lambda Single Antigen, cont.

	**** Serum 108 ****																						
Ctr	B51	B52	B59	B63	B64	B65	B39	B3901	B78	B7801	B53	B77	B82	B8201	A24	A2403	Cw5	A203	B73	A23	A33	Other	
54	6422	5016	4187	3785	7294	7642	4850		5263		4358	4503	2038										One Lambda
230					6018	6480	3270		4248													Bw4	One Lambda
774	5226	4042	3180	2779	5940	6190	3609		4146		3128	3366											One Lambda
792	3502	2788	1705	1877	3481	3809	1930		2891		2460	2309											One Lambda
1160	6167	5433	4520	3975	7173	7277	4389		5613		4669	4939	2576		1882		1875		1126	1201	1102	A25,A32	One Lambda
2400	7293	6768	5979	5671	9283	9248	6411		7171		6164	6312	3983		2429		2240						One Lambda
3224	6035	4885	3991	3140	6738	7034	4239			5019	4279	4395		2184	1743	1507	1182	16366	1049	1015		Bw4	One Lambda
3753	4299	4227	3080	2930	5760	5835	2961		4387		3357	3430	1247										One Lambda
3766	6209	4883	3968	3560	7075	7825	4126	4126	5216		4111	4230	2314	2314	1739	1599	2002						One Lambda
8001	6712	5375	4440	3998	7922	8199	4317		5834		4804	4529	1766		1479		1521						One Lambda
8035	3920	3691	2658	2364	5648	5964	2686		3950		2858	3142		965			1659		965				One Lambda
8050	3839	3846	2558	2306	5537	5848	2579		3918		2608	2831					1289						One Lambda
8079	4700	3700	2800	2700	5600	5900	3000		4000		3000	3100						16000					One Lambda
8083	5437	4234	2665	2502	6660	7792	2839		4375			2963					2492						One Lambda
8096	6281	5502	1227	4019	4145	5363	5397		3674				9492		2429				9976	1434	2762	Cw4,Cw6,A11,B60>	One Lambda
8117	6033	5051	4379	3786	6637	6477	4724		5127		4060	4481	2680		1263					757		Bw4	One Lambda
Avg	5472	4629	3422	3293	6307	6680	3833	-	4654	-	3835	3895	3262	1821	1852	1553	1783	16183	3279	1102	1932		
Std Dev.S	1167	979	1229	961	1388	1308	1184	-	1058	-	1058	1060	2641	744	443	65	456	259	4465	287	1174		
MFI %CV	21%	21%	36%	29%	22%	20%	31%	-	23%	-	28%	27%	81%	41%	24%	4%	26%	2%	136%	26%	61%		

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 19a. Individual laboratory results for Serum #108 - class I by Lifecodes Single Antigen, cont.

	**** Serum 108 ****																						
Ctr	B51	B52	B59	B63	B64	B65	B39	B3901	B78	B7801	B53	B77	B82	B8201	A24	A2403	Cw5	A203	B73	A23	A33	Other	
4661	3838	3563	3570					3754	3268	4399			5537		6651			3620			4963	B14	Lifecodes
8029	4274	3909	4180	5196	5605		5295	3974	3807		666		5197		8501	559		3961	773	664			Lifecodes
8103	2025	2882	2624	3741	4032	2509	3489	2611		2799					5205			2509			3489	B14	Lifecodes
Avg	3379	3451	3458	4469	4819	-	4392	3446	3538	3599	-	-	5367	-	6786	559	-	3363	-	-	4226		
Std Dev.S	1193	523	784	1029	1112	-	1277	732	381	1131	-	-	240	-	1652	-	-	759	-	-	1042		
MFI %CV	35%	15%	23%	23%	23%	-	29%	21%	11%	31%	-	-	4%	-	24%	-	-	23%	-	-	25%		

Table 20a. Individual laboratory results for Serum #105 - class II by One Lambda Single Antigen

	**** Serum 105 ****										
ctr	DQ4	DQ5	DQ6	DR15	DR16	DR51	DQ8	DQ9	DQA1*01	Other	
54	10978	24270	24326	21393	16765	17255	6449	7521			One Lambda
230	9019	24001	13652	20410	16674	15145	5038	5367			One Lambda
774	10525	23900	24285	20871	15806	16271	5665	6390			One Lambda
792	10895	22154	22490	19971	15891	15822	5634	6536			One Lambda
1160	11132	25340	25311	20321	15756	15219	6132	6658			One Lambda
2400	12027	26237	26088	23452	20581	18305	6626	6916			One Lambda
3224	11170	23508	23594	20491	16123	16009	6020	7279	23594		One Lambda
3753	7908	22218	22223	18755	15524	14038	4585	4811			One Lambda
3766	11905	26122	25501	22713	18685	18518	6320	7083			One Lambda
8001	13145	24375	24139	22509	18956	19378	6549	7478			One Lambda
8035	10927	27688	27388	22863	17930	17765	6556	6881	27709	DQA1*03	One Lambda
8050	6916	22735	22898	18205	15355	13529	2609	2723			One Lambda
8079	12000	22000	22000	22000	17000	18000	6600	7500	22000	DQA1*03	One Lambda
8083	13895	27122	27607	23916	19233	20770	7814	9389			One Lambda
8096	5955	9553	14828	16944	12717	13548				DR1,DR103,DR4,DR5 >	One Lambda
8117	10088	24480	25335	19560	15827	14941	5287	5839			One Lambda
Avg	10530	23481	23229	20898	16801	16532	5859	6558	24434		
Std											
Dev.S	2146	4098	3893	1961	1905	2137	1191	1499	2946		
MFI											
%CV	20%	17%	17%	9%	11%	13%	20%	23%	12%		

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 20a. Individual laboratory results for Serum #105 - class II by Lifecodes Single Antigen

	**** Serum 105 ****										
ctr	DQ4	DQ5	DQ6	DR15	DR16	DR51	DQ8	DQ9	DQA1*01	Other	
4661	3415	11169	13182	11522	8319	7363					Lifecodes
8029	4446	16899	18007	16664	11975	10695	2972	2253		DR11	Lifecodes
8103	2231	10078	13199	9893	6536	5560	1605	1246	13199	DQ3,DQA1*04	Lifecodes
Avg	3364	12715	14796	12693	8943	7873	2289	1750	-		
Std											
Dev.S	1108	3664	2781	3534	2773	2605	967	712	-		
MFI											
%CV	33%	29%	19%	28%	31%	33%	42%	41%	-		

Table 21a. Individual laboratory results for Serum #106 - class II by One Lambda Single Antigen

	**** Serum 106 ****																					
ctr	DPw2	DPw3	DR10	DR11	DR12	DR13	DR14	DR17	DR18	DR52	DR7	DP18	DPw6	DP14	DP28	DP10	DP20	DR9	DP17	DP9	DQ6	DQ7
54	18045	18639	8287	15252	4007	8883	6383	10951	9080	13382	4014	16091	16965	17942	17418	13193	18365		17279	18685		3341
230	16685	16695	7630	12871	3570	5857	5273	10610	8803	7926	3655	13903	15290		14358	12284	16963	3971				
774	16339	16932	6801	13837	3436	8176	5643	9377	7733	11743	3317	14181	15312	15647	15675	11356	16347	3920	14991	16850	4035	2763
792	14898	15045	7511	12500	3053	9118	6839	10389	8340	10550	2943	13232	13953	14154	14080	11175	15220	3452	14147	15703	5950	2830
1160	15085	16553	7325	14839	3229	8686	7008	9552	7878	10476	2508	15717	15264	15410	15036	11588	14762		14822	15231		2660
2400	20165	20135	9762	16912	4367	6803	6527	12348	10204	9456	4144	16900	18753	19019	17821	15428	19332	4458	18537	20519	7009	3113
3224	17321	18149	7948	14250	4101	9042	6420	10854	8933	12653	3828	15756	16198	15984	16636	12717	16924	4406	16723	18112	6216	3398
3753	16266	16479	5081	13077	2046	4848	3960	8703	7340	6556	3097	12908	15284	15549	13843	11158	17018	1948	15379	16408	3444	1828
3766	18270	19394	9726	15041	4340	11989	8925	12935	10630	14286	3913	17137	17604	18296	18318	14063	18431	4777	18064	19225	7603	3710
8001	19010	19009	8268	15490	3776	10702	7779	11945	10181	12959	3528	16741	17094	17742	18130	13845	18402	4175	17436	19101	6326	3325
8035	18329	18438	7192	14134	2762	7071	5787	12519	9733	8541	4154	15555	16492	17446	15807	12796	17846	5166	16945	18443	4586	2499
8050	16040	16479	5369	13143	2790	6583	5271	10628	8640	6563	2883	13347	15041	15883	14107	11469	16347	3532	15531	16883	4030	1956
8079	16000	16000	8000	14000	3400	9500	7000	11000	8800	12000	3100	15000	15000	15000	15000	12000	16000	3600	15000	17000	5700	
8083	18746	19714	9645	15682	4982	11758	8717	13810	11344	15400	4991	17167	17861	18197	18180	14356	18625	5634	18326	19779	8230	4233
8096	6558	6625	3459	11904	6094	6300	4648	7021	7709	7228	7470	9003		8219				8224			7837	10581
8117	16052	16205	6775	13181	2902	7521	5433	8548	7054	9967	2640	14342	14783	15346	15077	11635	15556	3156	14966	16099	4606	2563
Avg	16488	16906	7424	14132	3678	8302	6351	10699	8900	10605	3762	14811	16060	15989	15966	12604	17076	4316	16296	17717	5813	3486
Std																						
Dev.S	3039	3129	1715	1339	979	2061	1366	1784	1241	2763	1185	2104	1352	2594	1646	1324	1381	1444	1481	1628	1580	2143
MFI																						
%CV	18%	19%	23%	9%	27%	25%	22%	17%	14%	26%	32%	14%	8%	16%	10%	11%	8%	33%	9%	9%	27%	61%

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 21a. Individual laboratory results for Serum #106 - class II by Lifecodes Single Antigen

	**** Serum 106 ****																					
ctr	DPw2	DPw3	DR10	DR11	DR12	DR13	DR14	DR17	DR18	DR52	DR7	DP18	DPw6	DP14	DP28	DP10	DP20	DR9	DP17	DP9	DQ6	DQ7
4661	10383	9609	3429	9923	2756	5235	4476	5752	4919	7749	2762	10006	9880	10911	10112			3480	7246	9530	3423	1433
8029	12171	13901	5566	12567	2942	6515	6708	7584	8495	9815	2513		11878					2952			4077	1041
8103	5584	6506	2222	5589	1124	2330	2742	3195	3463	4405	954	5422	5287	6108	6168			1268	4929	6278	1798	
Avg	9379	10005	3739	9360	2274	4693	4642	5510	5626	7323	2076	7714	9015	8510	8140	-	-	2567	6088	7904	3099	1237
Std																						
Dev.S	3406	3713	1693	3523	1000	2144	1988	2204	2589	2730	980	3241	3380	3396	2789	-	-	1155	1638	2300	1173	277
MFI																						
%CV	36%	37%	45%	38%	44%	46%	43%	40%	46%	37%	47%	42%	37%	40%	34%	-	-	45%	27%	29%	38%	22%

Table 21a. Individual laboratory results for Serum #106 - class II by One Lambda Single Antigen, cont.

	**** Serum 106 ****						
ctr	DQ9	DQ8	DPw4	DP402	DPw1	Other	
54	2440	2092		16397	1703		One Lambda
230				15215			One Lambda
774			14474				One Lambda
792	2073	1720	13844				One Lambda
1160	2054	1927		15304	1455	DPw5,DQA1*05	One Lambda
2400	2542	2444	19041		2474		One Lambda
3224	2421	2071		15788		DQA1*05,DQA1*06	One Lambda
3753	1473	1281		14367			One Lambda
3766	2701	2321	17376		2238	DP11	One Lambda
8001	2400	2114	17351		1315	DQA1*01	One Lambda
8035	2079	1872	16771			DPA1*01,DPA1*04,DQA1*01,DQA1*03 >	One Lambda
8050	1361	1224		14978		DQA1*05	One Lambda
8079				15000		DPA1*01,DPA1*04,DQA1*01,DQA1*03 >	One Lambda
8083	3118	2816	17074				One Lambda
8096	6069	5192	7170		6672	DR1,DR103,DR4,DR8 >	One Lambda
8117	1700	1608		14359	1438	DQ2	One Lambda
Avg	2495	2206	15388	15176	2471		
Std							
Dev.S	1181	1000	3716	684	1903		
MFI							
%CV	47%	45%	24%	5%	77%		

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 21a. Individual laboratory results for Serum #106 - class II by Lifecodes Single Antigen, cont.

	**** Serum 106 ****						
ctr	DQ9	DQ8	DPw4	DP402	DPw1	Other	
4661	1088			9298		DR3,DR4,DR1403,DQ2	Lifecodes
8029	946	1059	11923			DR4,DR1403,DR1404	Lifecodes
8103			5484	5484		DR3,DR1403,DR1404	Lifecodes
Avg	1017	-	8704	7391	-		
Std							
Dev.S	100	-	4553	2697	-		
MFI							
%CV	10%	-	52%	36%	-		

Table 22a. Individual laboratory results for Serum #107 - class II by One Lambda Single Antigen

	**** Serum 107 ****																			
ctr	DPw2	DPw3	DR11	DR13	DR14	DR17	DR52	DP14	DP17	DP18	DPw6	DR10	DR18	DP28	DP9	DR7	DP10	DP20	DQ6	DR12
54	13737	14905	11387	5728	4003	7077	8929	13648	13136	11614	13208	5338	5738	13029	14844	2277	9331	14439		2269
230	12889	13319	10044	5688	3039	7053	6890	12942	12424	10222	12169	4745	5688	10829	13980	2085	8890	13547		
774	12814	14278	11132	5731	3705	6457	7953	12720	12496	10892	12230	4168	5483	12003	13500	2115	8844	13409	2856	2181
792	7355	7598	7012	3488	2415	4436	4318	7585	7065	5045	6645	2850	3249	7155	8871		5900	7948	2079	
1160	10986	12455	10621	5416	4161	5857	6321	11569	10969	10789	11821	4444	4925	10816	11137	1361	8799	11717		1718
2400	15386	15744	12958	7017	3878	7667	5646	14948	15576	12290	14466	5953	6343	13209	16387	2155	11110	15626	3910	2224
3224	14292	15292	12347	6966	4793	7899	9437	14186	14060	12599	13811	5569	6467	13750	15138	2280	10073	14442	3877	2623
3753	11082	11533	8511	2773	2132	5282	5165	11162	11218	8461	10533	3076	4278	9207	12420	1499	7506	11735	1800	1387
3766	13592	14532	11666	7059	4956	7501	8559	13652	13437	11871	12719	5616	5883	12874	14511	1772	9574	14229	3934	2025
8001	14576	15338	12306	7280	4897	7999	8629	14510	14456	12778	13742	5284	6565	14074	15771	1905	10529	14426	3700	2077
8035	13503	13866	10615	4327	3241	8021	5223	13237	13335	10772	12342	4617	6075	11449	14548	2324	8802	14435	2435	2124
8050	12639	13183	9921	3855	2907	7296	4781	12240	12225	9952	11724	4035	5646	10416	13768	1994	8548	13447	2366	1920
8079	12000	13000	9900	6000	4000	6700	7400	12000	12000	1000	11000	4500	5400	11000	13000		8400	12000	3200	
8083	15510	16548	12717	7794	5365	9326	10576	15219	15152	13644	14804	6129	7727	14868	16671	2884	11098	16150	4876	2748
8096	862	854	1676	628	406	678	844	1047	1294	1396		574	805			776			973	707
8117	11985	13063	10468	4720	3235	5521	6412	11918	11919	10838	11466	3961	4480	11234	12796	1460	8992	12415	2738	1631
Avg	12076	12844	10205	5279	3571	6548	6693	12036	11923	9635	12179	4429	5297	11728	13823	1921	9093	13331	2980	1972
Std																				
Dev.S	3585	3813	2753	1912	1254	1986	2398	3454	3456	3844	1967	1396	1584	2004	2032	519	1341	1995	1069	531
MFI																				
%CV	30%	30%	27%	36%	35%	30%	36%	29%	29%	40%	16%	32%	30%	17%	15%	27%	15%	15%	36%	27%

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 22a. Individual laboratory results for Serum #107 - class II by Lifecodes Single Antigen

	**** Serum 107 ****																			
ctr	DPw2	DPw3	DR11	DR13	DR14	DR17	DR52	DP14	DP17	DP18	DPw6	DR10	DR18	DP28	DP9	DR7	DP10	DP20	DQ6	DR12
4661	5115	5344	5552	2104	1602	2558	3378	5792	3793	5106	5503	760	1921	5486	5378	1051			1246	1082
8029	5336	6315	5533	2442	2322	2952	3811				5307	1977	3197			689			1436	740
8103	2823	3683	3220	1046	970	1438	1969	3419	2564	2926	3098			3370	3268					
Avg	4425	5114	4768	1864	1631	2316	3053	4606	3179	4016	4636	1369	2559	4428	4323	870	-	-	1341	911
Std																				
Dev.S	1391	1331	1341	728	676	785	963	1678	869	1541	1336	861	902	1496	1492	256	-	-	134	242
MFI																				
%CV	31%	26%	28%	39%	41%	34%	32%	36%	27%	38%	29%	63%	35%	34%	35%	29%	-	-	10%	27%

Table 22a. Individual laboratory results for Serum #107 - class II by One Lambda Single Antigen, cont.

	**** Serum 107 ****								
ctr	DP402	DPw4	DR9	DQ7	DQA1*05	DQ8	DQ9	Other	
54	12238			1912					One Lambda
230	11647							DPA1*02	One Lambda
774	11744		2506						One Lambda
792		6486							One Lambda
1160	11055			1345	1345	937	1005	DPw1,DPw5	One Lambda
2400		14325	2485	2134					One Lambda
3224	13257		2626	2184	2184	1257	1449	DQA1*06	One Lambda
3753	9949								One Lambda
3766		12109	2278	1660	1660				One Lambda
8001		13298	2251	1824		1103	1201		One Lambda
8035	12124		2826		1392			DPA1*01,DPA1*04,DQA1*01,DQA1*03>	One Lambda
8050	11465		2374		1434			DQA1*03,DQA1*06	One Lambda
8079	11000							DPA1*01,DPA1*04,DQA1*01	One Lambda
8083		14073	3504	2459					One Lambda
8096		729	671	721	314	718	686	DR1,DR103,DR4,DR8 >	One Lambda
8117	11253		1724	1500		851	950		One Lambda
Avg	11573	10170	2325	1749	1388	973	1058		
Std Dev.S	880	5454	738	520	611	211	286		
MFI %CV	8%	54%	32%	30%	44%	22%	27%		

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 22a. Individual laboratory results for Serum #107 - class II by Lifecodes Single Antigen, cont.

	**** Serum 107 ****								
ctr	DP402	DPw4	DR9	DQ7	DQA1*05	DQ8	DQ9	Other	
4661	5255		1419					DR3,DR1403	Lifecodes
8029		5363	817					DR1403,DR1404	Lifecodes
8103	2950	2950						DR3,DR1403	Lifecodes
Avg	4103	4157	1118	-	-	-	-		
Std Dev.S	1630	1706	426	-	-	-	-		
MFI %CV	40%	41%	38%	-	-	-	-		

Table 23a. Individual laboratory results for Serum #108 - class II by One Lambda Single Antigen

		**** Serum 108 ****																				
ctr	DPw2	DPw3	DQ2	DR11	DR13	DR14	DR17	DR18	DR52	DR7	DP17	DP18	DPw6	DP14	DP28	DP9	DP10	DP20	DP402	DPw4	Other	
54	23134	21289	10366	21951	8337	8875	19660	16242	20074	3814	20138	22777	19349	19910	22698	21874	21046	21229	22504			One Lambda
230	22506	19065	4734	19004	10200	9300	19166	16122	17069	3128	17780	21147	17429	17807	20998	20245	18984	19604	21619		DPA1*02	One Lambda
774	21768	18308	7061	19506	9718	9337	16840	14497	15796	2601	17455	21010	16337	17829	21253	19274	18665	18731	21216			One Lambda
792	19728	16972	8348	17248	10146	10028	16977	13926	15968	2862	15634	18626	15544	15572	19845	17283	16318	16859		18794		One Lambda
1160	21361	18918	7715	21059	8772	9130	16838	14857	17079	2936	17478	21565	18050	18084	20242	18155	19037	17848	21187			One Lambda
2400	25327	22390	6346	22805	11173	10476	22252	18763	19777	4699	21946	23158	20960	20439	23619	23034	21201	23066	23891			One Lambda
3224	22545	19696	9723	20056	7806	8268	18267	15304	18824	3774	18362	21882	18319	18220	21871	19874	19533	19865	21447			One Lambda
3753	22327	18824	4037	19388	8365	8010	18161	15619	15131	2307	18449	21488	17096	18663	21230	20170	20130	19675	21689			One Lambda
3766	22244	19775	9137	20360	10463	10941	19440	16099	19018	3356	18426	22199	17969	18464	22206	20704	19810	20085		21877		One Lambda
8001	23328	20732	9292	21463	12895	13037	20588	17769	19995	3309	19200	22683	18798	20209	22828	21214	20153	20748		22484		One Lambda
8035	25479	20572	5382	20905	10256	9849	21436	17697	18418	3377	19273	23544	18365		23458		20663	21460	24081		DPA1*01,DPA1*04,DQA1*05	One Lambda
8050	23578	19124	4738	19474	9919	9507	19718	15941	16915	3103	18475	22276	17311	18662	21542	20681	20303	20216	22590			One Lambda
8079	20000	18000	8200	19000	11000	11000	18000	15000	17000	2900	17000	20000	16000	17000	20000	19000	18000	19000	19000		DPA1*01,DPA1*04,DQA1*05	One Lambda
8083	24863	21275	11654	21630	9219	9807	20600	17498	21349	4882	19947	22752	18550	19882	23577	21508	20416	21700		22066		One Lambda
8096	11836	7945	11461	18620	10665	8317	14690	13661	12286	9317	12920	18053		11988						10184	DR1,DR103,DR4,DR8 >	One Lambda
8117	21678	18413	4007	18868	8644	8847	16443	14195	15656	2747	17217	21007	16706	17411	20888	19432	18187	19012	19995			One Lambda
Avg	21981	18831	7638	20084	9849	9671	18692	15824	17522	3695	18106	21510	17786	18009	21750	20175	19496	19940	21747	19081		
Std																						
Dev.S	3169	3227	2562	1462	1303	1264	2034	1499	2312	1653	2020	1544	1393	2115	1278	1512	1318	1578	1505	5185		
MFI																						
%CV	14%	17%	34%	7%	13%	13%	11%	9%	13%	45%	11%	7%	8%	12%	6%	7%	7%	8%	7%	27%		

Blue = DSA against cell #103 only

Gold = DSA against cell #104 only

Green = DSA against cell #103 and #105

Table 23a. Individual laboratory results for Serum #108 - class II by Lifecodes Single Antigen

		**** Serum 108 ****																				
ctr	DPw2	DPw3	DQ2	DR11	DR13	DR14	DR17	DR18	DR52	DR7	DP17	DP18	DPw6	DP14	DP28	DP9	DP10	DP20	DP402	DPw4	Other	
4661	15475	10787	2899	14195	3857	4546	7575	6199	8076	2179	8022	15259	11262	12759	14190	10820			14185		DR3,DR1403,DQ5,DQ7	Lifecodes
8029	19888	18959	3116	19591	7353	8772	16447	17210	15223	3060			18622							19517	DR4,DR1403,DR15,DR16 >	Lifecodes
8103	16242	12656	891	15579	2386	3243	7795	8827	8481	1004	10867	15567	11617	12766	16594	12422			15262	15262	DR3,DR1403	Lifecodes
Avg	17202	14134	-	16455	4532	5520	10606	10745	10593	2081	9445	15413	13834	12763	15392	11621	-	-	14724	17390		
Std																						
Dev.S	2358	4282	-	2803	2551	2890	5060	5751	4015	1031	2012	218	4151	5	1700	1133	-	-	762	3009		
MFI																						
%CV	14%	30%	-	17%	56%	52%	48%	54%	38%	50%	21%	1%	30%	0%	11%	10%	-	-	5%	17%		

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Table 24. Individual Virtual crossmatch results for Serum #107 vs Donor# V1

Donor #V1 HLA genotype: A23:01:01-A*25:01:01-B*14:02:01-B*58:01:01-C*07:18-C*08:02:01-DRB1*01:01:01-DRB1*13:03:01-DRB3*01:01:01-DQA1*01:01:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*05:01-DPB1*104:01:01-DPB1*17:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	107	94	Positive	A25 (14060) B58 (7367)	Positive	DR52 (8929) DQ7 (1912) DPw3 (13838) DP17 (13136)	Unacceptable	
230	107	87	Positive	A25 (12696) B58 (6725)	Positive	DR13 (5688) DR52 (8025) DPw3 (13319) DP17 (12537)	Unacceptable	
774	107	92	Positive	A25 (12024) B58 (6372)	Positive	DR52 (7953) DP17 (12496)	Unacceptable	
792	107	88	Positive	A25 (6887) B58 (3834)	Positive	DR52 (4318) DP17 (7065)	Unacceptable	
1461	107		Positive	A25 (2529) B58 (820)	Positive	DR52 (2929) DPw3 (4356) DP17 (3195)	Unacceptable	
2400	107	98%	Positive	A25 (13720) B58 (6483)	Positive	DR13 (1422) DR52 (8699) DP17 (15563)	Unacceptable	
3224	107	95	Positive	A25 (13830) B58 (7186)	Positive	DR13 (6966) DR52 (9437) DQ7 (2184) DPw3 (15292) DP17 (14060) DQA1*05 (2184)	Unacceptable	
3753	107	84%	Positive	A25 (9775) B58 (5500)	Positive	DR13 (2773) DR52 (6166) DPw3 (11533) DPw6 (10533) DP17 (11218) DP14 (11162)	Unacceptable	Patient displays donor-specific antibodies against DRB3*01:01 (MFI=6166). Patient also displays donor specific antibodies against DP104 which is represented by DP3(MFI=11533), DP6(MFI=10533), DP14(MFI=11162) and DP17(MFI=11218).
3766	107	76%	Positive	A25 (12961) B58 (6559)	Positive	DR52 (17266) DQ7 (1660) DP13 (1755) DP17 (13437)	Unacceptable	
3966	107	90	Positive	A25 (11386) B58 (3624)	Positive	DR13 (2545) DR52 (4816) DQ7 (1218) DP17 (12343)	Unacceptable	
4661	107	46%	Positive	A25 (3702) B58 (806)	Positive	DR52 (3378) DP17 (3793)	Unacceptable	Epitope 145RT,71SA; Epitope 32H,57DEDP
8001	107	97	Positive	A25 (14904) B58 (7531)	Positive	DR13 (2122) DR52 (8629) DQ7 (1824) DP17 (14456) DQA1*05 (1824)	Unacceptable	C*07:18, C*08:02 are not included in current LSAB panel; DPB1*104:01 is not included in current LSAB panel
8029	107	18	Positive	A25 (3618) B58 (1172)	Positive	DR13 (2442) DP17 (4604)	Unacceptable	-
8035	107	74%	Positive	A25 (11732) B58 (7559)	Positive	DR13 (1838) DR52 (8523) DP17 (13335) DQA1*05 (1976)	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.

Table 24. Individual Virtual crossmatch results for Serum #107 vs Donor# V1 - cont.

Donor #V1 HLA genotype: A23:01:01-A*25:01:01-B*14:02:01-B*58:01:01-C*07:18-C*08:02:01-DRB1*01:01:01-DRB1*13:03:01-DRB3*01:01:02-DQA1*01:01:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*05:01:01-DPB1*104:01:01-DPB1*17:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8050	107	87	Positive	A25 (10818) B58 (6204)	Positive	DR13 (3855) DR52 (4781) DPw3 (13183) DP17 (12225) DQA1*05 (1697)	Unacceptable	Listed DPw3 DSA for DPB1*104:01
8079	107	100	Positive	A25 (12000) B58 (6000)	Positive	DR52 (7400) DPw3 (13000) DP17 (12000)	Unacceptable	
8080	107	98	Positive	A25 (16397) B58 (9408)	Positive	DR13 (1693) DR52 (10918) DQ7 (2510) DPw3 (17516) DP17 (15893)	Unacceptable	Given that DPB1*104:01 is not represented by the single antigen bead panel, the following surrogate bead was selected: DPA1*02:01,DPB1*03:01
8083	107	97	Positive	A25 (17914) B58 (10500)	Positive	DR52 (10576) DQ7 (2459) DP17 (15152)	Unacceptable	Also A25 and B58 which are expressed on B cells
8096	107		Positive	A25 (971) B58 (787) Cw8 (623)	Positive	DR13 (628) DR52 (844) DP17 (1294) DQA1*05 (314)	Unacceptable	
8103	107	9	Positive	A25 (2702) B58 (807)	Positive	DR52 (1969) DP17 (2564)	Unacceptable	
8111	107	77	Positive	A25 (15200) B58 (8400)	Positive	DR52 (9600) DQ7 (2000) DP13 (2100) DP17 (14000)	Unacceptable	Additional DSA: DPB1*104:01(14700, DPB1*03:01G/P group)
8117	107	97%	Positive	A25 (10504) B58 (5028)	Positive	DR13 (1043) DR52 (6412) DQ7 (1500) DPw3 (13063) DP17 (11919)	Unacceptable	There is no bead with DPB1*104:01, use DPB1*03:01 because they both are in the same G group

Table 25. Individual Virtual crossmatch results for Serum #107 vs Donor# V2

Donor #V2 HLA genotype: A*02:01:01G-A*68:01:02G-B*07:02:01-B*49:01:01-C*07:01:01-C*07:02:01-DRB1*04:05:01-DRB1*11:02:01-DRB3*02:02:01-DRB4*01:03:01-DQA1*03:03:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*03:02:01-DPB1*04:01:01-DPB1*104:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	107	94	Positive	A68 (2061)	Positive	DR11 (11387) DR52 (8929) DQ7 (1617) DPw3 (13838)	Unacceptable	
230	107	87	Negative	no class I DSA	Positive	DR11 (10044) DR52 (6890) DPw3 (19065)	Unacceptable	
774	107	92	Negative	no class I DSA	Positive	DR11 (11132)	Unacceptable	
792	107	88	Negative	no class I DSA	Positive	DR11 (7012)	Unacceptable	No Class I DSA; Donor is DRB1*11:02 sharing epitope specificity with 11:01, 11:04
1461	107		Negative	no class I DSA	Positive	DR11 (3653) DR52 (793) DPw3 (4356)	Unacceptable	
2400	107	98%	Positive	A68 (2724)	Positive	DR11 (12945) DR52 (2046) DQ5 (2121)	Unacceptable	
3224	107	95	Borderline	A68 (2265)	Positive	DR11 (12347) DR52 (9437) DQ7 (2184) DQ8 (1257) DPw3 (15292) DQA1*05 (2184)	Unacceptable	
3753	107	84%	Negative	no class I DSA	Positive	DR11 (8511) DPw3 (11533) DPw6 (10533) DP17 (11218) DP14 (11162)	Unacceptable	No donor-specific HLA Class I antibodies were detected against this donor. Patient also displays donor specific antibodies against DP104 which is represented by DP3(MFI=11533), DP6(MFI=10533), DP14(MFI=11162) and DP17(MFI=11218).
3766	107	76%	Positive	A68 (2001)	Positive	DR11 (11666) DR52 (1499) DQ7 (1660)	Unacceptable	
3966	107	90	Positive	A68 (942)	Positive	DR11 (18814) DR52 (4816) DPw4 (11471)	Unacceptable	
4661	107	46	Negative	no class I DSA	Positive	DR11 (5552) DPw3 (5344)	Unacceptable	Epitope 57DEDP
8001	107	97	Borderline	A68 (1760)	Positive	DR52 (1395) DQ7 (1824) DQ8 (1103)	Unacceptable	C*07:01 is not in the LSAB panel; DPB1*104:01, DRB1*11:02 are not in the LSAB panel
8029	107	18%	Negative	no class I DSA	Positive	DR11 (5533) DR52 (3811) DPw4 (5363)	Virtual B CELL Prediction POSITIVE	-

Table 25. Individual Virtual crossmatch results for Serum #107 vs Donor# V2 - cont.

Donor #V2 HLA genotype: A*02:01:01G-A*68:01:02G-B*07:02:01-B*49:01:01-C*07:01:01-C*07:02:01-DRB1*04:05:01-DRB1*11:02:01-DRB3*02:02:01-DRB4*01:03:01-DQA1*03:03:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*03:02:01-DPB1*04:01:01--DPB1*104:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8035	107	74%	Negative	no class I DSA	NT	DR52 (1284) DQ5 (1976)	POTENTIAL POSITIVE, but no bead for a possible DSA	NO CLASS I DSA DETECTED; In cases like these we would recommend a real cross match because of the possibility of a DSA to DRB1*11:02. The potential exists since we detected strong antibodies to other DR11 alleles and no bead exists for DRB1*11:02
8050	107	87	Negative	no class I DSA	Positive	DR11 (9921) DR52 (4781) DPw3 (13183) DQA1*05 (1697)	Unacceptable	Listed DPw3 DSA for DPB1*104:01
8079	107	100	Negative	no class I DSA	Positive	DPw3 (13000)	Unacceptable	The patient has antibodies against DRB1*11:01, 11:04; donor has DRB1*11:02 and DPB1*104:01 antigens, neither represented on the antibody panel. Patient's DPB1*03:01 antibody is DSA (G group with DPB1*104:01).
8080	107	98	Negative	A68 (2506)	Positive	DR11 (13950) DR52 (1906) DQ7 (2510) DPw3 (17516)	Unacceptable	B Cell prediction Positive; Given that DPB1*104:01 is not represented by the single antigen bead panel, the following surrogate bead was selected:DPA1*02:01,DPB1*03:01
8083	107	97	Borderline	A68 (2984)	Borderline	DQ7 (2459)	Other-Needs physical crossmatch	Needs physical crossmatch as DRB1*11:02 antibody cannot be detected.
8096	107		Positive	A2 (353) B7 (517) A68 (598) Cw7 (600)	Positive	DR52 (844) DR53 (759) DQ7 (721) DQ8 (718) DPw4 (729) DQA1*05 (314)	Unacceptable	
8103	107	9%	Negative	no class I DSA	Negative		Acceptable	DRB1*11:01, DRB1*11:03 and DRB1*11:04 all positive but DRB1*11:02 Negative
8111	107	77	Negative	A68 (2700)	Positive	DR11 (12100) DR52 (1800) DQ7 (2200)	Unacceptable	Overall unacceptable based on DSA; Additional DSA: DPB1*104:01(14700, DPB1*03:01G/P group)
8117	107	97%	Borderline	A68 (1672)	Positive	DR11 (10468) DR52 (1156) DQ7 (1500) DQ8 (851) DPw3 (13063)	Unacceptable	There is no bead for DPB1*104:01, use DPB1*03:01 because they are in the same G group.

Table 26. Individual Virtual crossmatch results for Serum #107 vs Donor# V3

Donor #V3 HLA genotype: A*02:06-A*32:01-B*14:01-B*52:01-C*04:01:01G-C*08:02-DRB1*04:04-DRB1*07:01-DRB4*01:01:01G-DQA1*02:01-DQA1*03:01:01G-DQB1*02:02-DQB1*03:02-DPB1*03:01-DPB1*04:02

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	107	94	Negative	no class I DSA	Positive	DR7 (2277) DPw3 (13878) DP402 (12238)	Unacceptable	Unacceptable due to class II positive
230	107	87	Negative	no class I DSA	Positive	DR7 (2085) DPw3 (13319) DP402 (11647)	Unacceptable	
774	107	92	Negative	no class I DSA	Positive	DR7 (2115) DPw3 (14278) DP402 (11744)	Unacceptable	
792	107	88	Negative	no class I DSA	Positive	DPw4 (6486)	Unacceptable	No Class I DSA
1461	107		Negative	no class I DSA	Positive	DR7 (520) DPw3 (4356) DPw4 (3470)	Unacceptable	
2400	107	98%	Negative	no class I DSA	Positive	DPw3 (15737) DP402 (14312)	Unacceptable	
3224	107	95	Negative	no class I DSA	Positive	DR7 (2280) DQ8 (1257) DPw3 (15292) DP402 (13257)	Unacceptable	
3753	107	84%	Negative	no class I DSA	Positive	DR7 (1499) DPw3 (11533) DP402 (9949)	Unacceptable	No donor-specific HLA Class I antibodies were detected against this donor.
3766	107	76%	Negative	no class I DSA	Positive	DR7 (1772) DPw3 (14532) DPw4 (12109)	Unacceptable	
3966	107	90	Negative	no class I DSA	Positive	DR7 (1747) DQ8 (873) DPw4 (11471)	Unacceptable	
4661	107	46	Negative	no class I DSA	Positive	DR7 (1051) DPw3 (5344) DP402 (5255)	Unacceptable	Epitope 180VMP,57DEDP
8001	107	97	Negative	no class I DSA	Positive	DR7 (1905) DQ8 (1103) DPw3 (15338) DPw4 (13298)	Unacceptable	C*08:02 not in LSAB panel
8029	107	18%	Negative	no class I DSA	Positive	DPw3 (6315) DPw4 (5363)	Acceptable	Intermediate risk
8035	107	74%	Negative	no class I DSA	Positive	DR7 (2324) DPw3 (13866) DP402 (12124)	Unacceptable	NO Class I DSA DETECTED; 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	107	87	Negative	no class I DSA	Positive	DR7 (1994) DPw3 (13183) DP402 (11465)	Unacceptable	
8079	107	100	Negative	no class I DSA	Positive	DPw3 (13000) DP402 (11000)	Unacceptable	
8080	107	98	Negative	no class I DSA	Positive	DR7 (2884) DPw3 (17113) DPw4 (15164)	Unacceptable	B Cell prediction Positive
8083	107	97	Negative	no class I DSA	Positive	DR7 (2884) DPw3 (16548) DPw4 (14073)	Unacceptable	Due to Class II antibody

Table 26. Individual Virtual crossmatch results for Serum #107 vs Donor# V3 - cont.

Donor #V3 HLA genotype: A*02:06-A*32:01-B*14:01-B*52:01-C*04:01:01G-C*08:02-DRB1*04:04-DRB1*07:01-DRB4*01:01:01G-DQA1*02:01-DQA1*03:01:01G-DQB1*02:02-DQB1*03:02-DPB1*03:01-DPB1*04:02

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8096	107		Positive	Cw4 (508) A2 (353) B52 (405) B64 (687) Cw8 (623)	Positive	DR4 (897) DR7 (776) DR53 (759) DQ2 (689) DQ8 (718) DPw3 (854) DPw4 (729) DQA1*02 (1030) DQA1*03 (991)	Unacceptable	
8103	107	9	Negative	no class I DSA	Borderline	DPw4 (2950) DP402 (2950)	Acceptable	Significance of a DPB1 antibody is uncertain. Would report as acceptable overall
8111	107	77	Negative	no class I DSA	Positive	DR4 (12900) DR7 (2500) DQ8 (1100) DPw3 (14700)	Unacceptable	Overall unacceptable based on DSA
8117	107	97%	Negative	no class I DSA	Positive	DR7 (1460) DQ8 (584) DPw3 (13063) DP402 (11253)	Unacceptable	

Table 27. Individual Virtual crossmatch results for Serum #107 vs Donor# V4

Donor #V4 HLA genotype: A*24:02:01-A*26:01:01-B*38:09-B*44:03:01-C*12:03:01-C*16:01:01-DRB1*04:02:01-DRB1*15:01:01-DRB4*01:03:01-DRB5*01:01:01-DQA1*01:02:01-DQA1*03:01:01-DQB1*03:02:01G-DQB1*06:02:01-DPB1*04:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	107	94	Positive	A26 (12948) B38 (3006)	Positive	no class II DSA	Unacceptable	Positive due to Class I antibodies.
230	107	87	Positive	A26 (11933) B38 (2633)	Positive	no class II DSA	Unacceptable	Due to Class I DSA
774	107	92	Positive	A26 (10558) B38 (2209)	Positive	DP402 (11744)	Unacceptable	
792	107	88	Positive	A26 (7792) B38 (1637)	Positive	no class II DSA	Unacceptable	No Class II DSA
1461	107		Positive	A26 (3372)	Positive	no class II DSA	Unacceptable	
2400	107	98%	Positive	A26 (13850) B38 (3118)	Negative	no class II DSA	Unacceptable	
3224	107	95	Positive	A26 (13380) B38 (3127)	Positive	DQ8 (1257)	Unacceptable	
3753	107	84%	Positive	A26 (10093) B38 (2129)	Positive	no class II DSA	Unacceptable	No donor-specific HLA Class II antibodies were detected against this donor.
3766	107	76%	Positive	A26 (13571) B38 (2666)	Negative	no class II DSA	Unacceptable	
3966	107	90	Positive	A26 (9752) B38 (2146)	Positive	DQ8 (873) DPw4 (11471) DQ6 (2276)	Unacceptable	
4661	107	46	Positive	A26 (4001)	Positive	no class II DSA	Unacceptable	Epitope 145RT,
8001	107	97	Positive	A26 (14806)	Positive	DR7 (1905) DQ8 (1103)	Unacceptable	B*38:09 not in LSAB panel
8029	107	18%	Positive	A26 (4256)	Borderline	DPw4 (5363) DQ6 (1436)	Unacceptable	-
8035	107	74%	Positive	A26 (11794)	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. Our B cell Positivity is based on the Class I DSAs. No Class II DSAs detected
8050	107	87	Positive	A26 (9512) B38 (2250)	Positive	no class II DSA	Unacceptable	
8079	107	100	Positive	A26 (12000)	Positive	no class II DSA	Unacceptable	The patient possesses anti-B*38:01 antibody, and the donor's B*38:09 antigen is not represented on the antibody panel.
8080	107	98	Positive	A26 (16125) B38 (4164)	Positive	no class II DSA	Unacceptable	Patient demonstrates Class I reactivity
8083	107	97	Positive	A26 (17766)	Negative	no class II DSA	Unacceptable	
8096	107		Positive	A24 (160) B44 (816) A26 (1056) Cw12 (767) Cw16 (610)	Positive	DR4 (897) DR15 (954) DR51 (726) DR53 (759) DQ8 (718) DPw4 (729) DQ6 (973) DQA1*01 (902) DQA1*03 (991)	Unacceptable	
8103	107	9%	Positive	A26 (3412)	Negative	no class II DSA	Unacceptable	
8111	107	77	Positive	A26 (15100)	Positive	no class II DSA	Unacceptable	
8117	107	97%	Positive	A26 (9529) B38 (2054)	Positive	DQ8 (584)	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #108 vs Donor# V1

Donor #V1 HLA genotype: A23:01:01-A*25:01:01-B*14:02:01-B*58:01:01-C*07:18-C*08:02:01-DRB1*01:01:01-DRB1*13:03:01-DRB3*01:01:02-DQA1*01:01:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*05:01-DPB1*104:01:01-DPB1*17:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	108	99	Positive	B65 (7642) B58 (13309)	Positive	DR13 (8337) DR52 (17139) DPw3 (21128) DP17 (20138)	Unacceptable	
230	108	99	Positive	B65 (6480) B58 (11706) Bw4 (5000)	Positive	DR13 (10200) DR52 (17069) DPw3 (19065) DP17 (17780)	Unacceptable	
774	108	99	Positive	B65 (6190) B58 (10850)	Positive	DR13 (9718) DR52 (13824) DP17 (17455)	Unacceptable	
792	108	99	Positive	B65 (3809) B58 (5970)	Positive	DR13 (10146) DR52 (14989) DP17 (15634)	Unacceptable	
1461	108		Positive	B65 (2562) B58 (3380)	Positive	DR13 (3386) DR52 (8956) DPw3 (12808) DP17 (11083)	Unacceptable	
2400	108	99%	Positive	A23 (1506) B65 (9188) B58 (14217)	Positive	DR13 (12097) DR52 (19085) DP17 (21924)	Unacceptable	
3224	108	99	Positive	A23 (1015) B65 (7034) B58 (12665) Bw4 (13773)	Positive	DR13 (7806) DR52 (18824) DPw3 (19696) DP17 (18362)	Unacceptable	
3753	108	99%	Positive	B65 (5835) B58 (10770)	Positive	DR13 (8365) DR52 (15131) DPw3 (18824) DPw6 (17096) DP17 (18449) DP14 (18663)	Unacceptable	Patient displays donor specific antibodies against DP104 which is represented by DP3(MFI=18824), DP6(MFI=17096) and DP14(MFI=18663).
3766	108	95	Positive	B65 (7825) B58 (13753)	Positive	DR13 (10463) DR52 (17266) DP17 (18426)	Unacceptable	
3966	108	99	Positive	B65 (6017) B58 (11926)	Positive	DR13 (2648) DR52 (15170) DP17 (17431)	Unacceptable	
4661	108	74%	Positive	B65 (5454) B58 (5728)	Positive	DR13 (3746) DR52 (8076) DP17 (8022)	Unacceptable	Epitope 131S; Epitope 13SE,56E
8001	108	99	Positive	A23 (975) B65 (8199) B58 (14518)	Positive	DR13 (12895) DR52 (17627) DP17 (19200) DQA1*05 (679)	Unacceptable	C*07:18, C*08:02 not in LSAB panel; DPB1*104:01 not in LSAB panel
8029	108	51%	Positive	B65 (5605) B58 (7228)	Positive	DR13 (7353) DR52 (15223) DP17 (17408)	Unacceptable	-
8035	108	94%	Positive	B65 (5964) B58 (12295)	Positive	DR13 (12278) DR52 (18073) DP17 (19273) DQA1*05 (1021)	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	108	99	Positive	B65 (5848) B58 (11170)	Positive	DR13 (9919) DR52 (16915) DPw3 (19124) DP17 (18475)	Unacceptable	Listed DPw3 DSA for DPB1*104:01
8079	108	100	Positive	B65 (5900) B58 (11000)	Positive	DR13 (11000) DR52 (16000) DPw3 (18000) DP17 (17000)	Unacceptable	

Table 28. Individual Virtual crossmatch results for Serum #108 vs Donor# V1 - cont.

Donor #V1 HLA genotype: A23:01:01-A*25:01:01-B*14:02:01-B*58:01:01-C*07:18-C*08:02:01-DRB1*01:01:01-DRB1*13:03:01-DRB3*01:01:01-DQA1*01:01:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*05:01:01-DPB1*104:01:01-DPB1*17:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8080	108	100	Positive	B65 (8742) B58 (15266)	Positive	DR13 (9226) DR52 (19435) DPw3 (21961) DP17 (21308)	Unacceptable	Given that DPB1*104:01 is not represented by the single antigen bead panel, the following surrogate bead was selected: DPA1*02:01,DPB1*03:01
8083	108	99	Positive	B65 (7792) B58 (14274)	Positive	DR13 (9219) DR52 (18563) DP17 (19947)	Unacceptable Needs physical crossmatch	Also B58 and B65 which are expressed on B cells
8096	108		Positive	A25 (4143) A23 (434) B65 (5363) B58 (6237) Cw8 (4374)	Positive	DR1 (345) DR13 (665) DR52 (2286) DQ5 (579) DQ7 (10571) DP17 (920)	Unacceptable	
8103	108	9%	Positive	B14 (4032) B65 (4032) B58 (5796)	Positive	DR13 (2297) DR52 (8481) DP17 (10867)	Unacceptable	
8111	108	99	Positive	A23 (1100) B14 (7500) B58 (13900)	Positive	DR13 (14000) DR52 (19000) DP17 (20000)	Unacceptable	Additional DSA: DPB1*104:01(21000, DPB1*03:01G/P group)
8117	108	100%	Positive	A23 (757) B65 (6477) B58 (10443)	Positive	DR13 (8644) DR52 (13953) DPw3 (18413) DP17 (17217)	Unacceptable	There is no bead with DPB1*104:01, use DPB1*03:01 because they are in the same G group

Table 29. Individual Virtual crossmatch results for Serum #108 vs Donor# V2

Donor #V2 HLA genotype: A*02:01:01G-A*68:01:02G-B*07:02:01-B*49:01:01-C*07:01:01-C*07:02:01-DRB1*04:05:01-DRB1*11:02:01-DRB3*02:02:01-DRB4*01:03:01-DQA1*03:03:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*03:02:01-DPB1*04:01:01-DPB1*104:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	108	99	Positive	A2 (19777) B49 (5002) A68 (13638)	Positive	DR11 (21951) DR52 (17768) DPw3 (21289)	Unacceptable	
230	108	99	Positive	A2 (17002) B49 (3798) A68 (11272) Bw4 (5000)	Positive	DR11 (19004) DR52 (17069) DPw3 (19065)	Unacceptable	
774	108	99	Positive	A2 (15930) B49 (3800) A68 (9697)	Positive	DR11 (19506) DR52 (13605)	Unacceptable	
792	108	99	Positive	A2 (9583) B49 (2215) A68 (5902)	Positive	DR11 (17248) DR52 (14885)	Unacceptable	Donor is DRB1*11:02 sharing epitope specificity with 11:01, 11:04
1461	108		Positive	A2 (4291) B49 (1775) A68 (2943)	Positive	DR11 (15371) DR52 (7430) DPw3 (12808)	Unacceptable	
2400	108	99%	Positive	A2 (21627) B49 (6173) A68 (14261)	Positive	DR11 (22783)	Unacceptable	
3224	108	99	Positive	A2 (18675) B49 (4485) A68 (12615) Bw4 (13773)	Positive	DR11 (20056) DR52 (18824) DPw3 (19696)	Unacceptable	
3753	108	99%	Positive	A2 (14482) B49 (3665) A68 (9387)	Positive	DR11 (19388) DR52 (15131) DPw3 (18824) DPw6 (17096) DP17 (18449) DP14 (18663)	Unacceptable	Patient displays donor specific antibodies against DP104 which is represented by DP3(MFI=18824), DP6(MFI=17096), DP14(MFI=18663) and DP17(MFI=18449).
3766	108	95%	Positive	A2 (20901) B49 (4548) A68 (14686)	Positive	DR11 (20360) DR52 (17076)	Unacceptable	
3966	108	99	Positive	A2 (15467) B49 (4008) A68 (8963)	Positive	DR11 (18814) DR52 (15170) DPw4 (21007)	Unacceptable	
4661	108	74	Positive	A2 (6825) B49 (4215) A68 (6057)	Positive	DR11 (14195) DR52 (5731) DQ7 (753) DPw3 (10787)	Unacceptable	Epitope 144TKH,131S; Epitope 56E,13SE,45EV
8001	108	99	Positive	A2 (21023) B49 (5043) A68 (14855)	Positive	DR52 (17844) DQA1*05 (679)	Unacceptable	C*07:01 not in LSAB panel; DRB1*11:02 not in LSAB panel
8029	108	51%	Positive	A2 (9734) B49 (4338) A68 (6891)	Positive	DR4 (572) DR11 (19165) DR52 (12927) DQ7 (544) DPw4 (19517)	Unacceptable	-
8035	108	94%	Positive	A2 (17196) B49 (3101) A68 (10776)	Positive	DR52 (17510) DQA1*05 (1021)	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	108	99	Positive	A2 (13658) B49 (3090) A68 (9299)	Positive	DR11 (19474) DR52 (16915) DPw3 (19124)	Unacceptable	Listed DPw3 DSA for DPB1*104:01

Table 29. Individual Virtual crossmatch results for Serum #108 vs Donor# V2 - cont.

Donor #V2 HLA genotype: A*02:01:01G-A*68:01:02G-B*07:02:01-B*49:01:01-C*07:01:01-C*07:02:01-DRB1*04:05:01-DRB1*11:02:01-DRB3*02:02:01-DRB4*01:03:01-DQA1*03:03:01-DQA1*05:05:01-DQB1*03:01:01-DQB1*03:02:01-DPB1*04:01:01-DPB1*104:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8079	108	100	Positive	A2 (18000) B49 (3300) A68 (12000)	Positive	DR52 (15000) DPw3 (18000)	Unacceptable	The donor possesses the DPB1*104:01 antigen, which is not represented on the antibody panel. Because the patient possesses the anti-DPB1*03:01 antibody, which is in a G group with DPB1*104:01, this is considered DSA.
8080	108	100	Positive	A2 (20572) B49 (5633) A68 (14748)	Positive	DR11 (23934) DR52 (19227) DPw3 (22332)	Unacceptable	Given that DPB1*104:01 is not represented by the single antigen bead panel, the following surrogate bead was selected:DPA1*02:01,DPB1*03:01
8083	108	99	Positive	A2 (22244) A68 (15855)	Positive	DR52 (19149)	Unacceptable	Also A2 and A68 which are expressed on B cells
8096	108		Positive	A2 (8001) B49 (1683) B7 (4263) A68 (6501) Cw7 (5104)	Positive	DR11 (8620) DR52 (2286) DR53 (8136) DQ7 (10571) DQ8 (1675) DPw4 (10184)	Unacceptable	
8103	108	47%	Positive	A2 (5984) B49 (2527) A68 (4541)	Positive	DR52 (6431)	Unacceptable	
8111	108	99	Positive	A2 (20600) B49 (4400) A68 (14100)	Positive	DR11 (21000) DR52 (18700)	Unacceptable	Additional DSA: DPB1*104:01(21000, DPB1*03:01G/P group)
8117	108	100%	Positive	A2 (15960) B49 (5047) A68 (9923) Bw4 (5047)	Positive	DR11 (18868) DR52 (14124) DPw3 (18413)	Unacceptable	There is no bead for DPB1*104:01, use DPB1*03:01 because they are in the same G group

Table 30. Individual Virtual crossmatch results for Serum #108 vs Donor# V3

Donor #V3 HLA genotype: A*02:06-A*32:01-B*14:01-B*52:01-C*04:01:01G-C*08:02-DRB1*04:04-DRB1*07:01-DRB4*01:01:01G-DQA1*02:01-DQA1*03:01:01G-DQB1*02:02-DQB1*03:02-DPB1*03:01-DPB1*04:02

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class I DSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	108	99	Positive	A2 (19777) B52 (5016) B64 (7294)	Positive	DR7 (3814) DQ2 (3293) DPw3 (21289) DP402 (22504)	Unacceptable	
230	108	99	Positive	A2 (17002) B52 (3971) B64 (6018) Bw4 (5000)	Positive	DR7 (3128) DQ2 (4734) DPw3 (19065) DPw4 (21619)	Unacceptable	
774	108	99	Positive	A2 (14429) B52 (4042) B64 (5940)	Positive	DR7 (2601) DQ2 (2019) DPw3 (18308) DP402 (21216)	Unacceptable	
792	108	99	Positive	A2 (9619) B52 (2788) B64 (3481)	Positive	DR7 (2862) DQ2 (2870) DPw4 (18794)	Unacceptable	
1461	108		Positive	A2 (5066) B52 (1600) B64 (2326)	Positive	DR7 (1073) DQ2 (953) DPw3 (12808) DPw4 (15615)	Unacceptable	
2400	108	99%	Positive	A2 (20897) B52 (6708) B64 (9223)	Positive	DR7 (4676) DQ2 (4351) DP402 (19513)	Unacceptable	
3224	108	99	Positive	A2 (18675) B52 (4885) B64 (6738) Bw4 (13773)	Positive	DR7 (3774) DQ2 (9723) DPw3 (19696) DP402 (21447)	Unacceptable	
3753	108	99%	Positive	A2 (14482) B52 (4227) B64 (5760)	Positive	DR7 (2307) DQ2 (4037) DPw3 (18824) DP402 (21689)	Unacceptable	
3766	108	95%	Positive	A2 (20415) B52 (4883) B64 (7075)	Positive	DR7 (3356) DQ2 (3278) DPw3 (19775) DPw4 (21877)	Unacceptable	
3966	108	99	Positive	A2 (15467) B52 (3710) B64 (5821)	Positive	DR7 (3145) DQ2 (4407) DPw3 (17959) DPw4 (21007) DQA1*03 (4460)	Unacceptable	
4661	108	74	Positive	A2 (9002) B52 (3838) B64 (4793)	Positive	DR7 (2179) DQ2 (2552) DPw3 (10787) DP402 (14185)	Unacceptable	Epitope 144KTH,131S; Epitope 25Q3,45GE3,56E
8001	108	99	Positive	A2 (20539) B52 (5375) B64 (7922)	Positive	DR7 (3309) DQ2 (3112) DPw3 (20732) DPw4 (22484)	Unacceptable	C*08:02 not in LSAB panel
8029	108	51%	Positive	A2 (9734) B52 (4274) B64 (5196)	Positive	DR7 (3060) DQ2 (2323) DPw3 (18959) DPw4 (19517)	Unacceptable	
8035	108	94%	Positive	A2 (15573) B52 (3691) B64 (5648)	Positive	DR7 (3377) DQ2 (3419) DPw3 (20572) DP402 (24081)	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	108	99	Positive	A2 (13658) B52 (3846) B64 (5537)	Positive	DR7 (3103) DQ2 (4738) DPw3 (19124) DP402 (22590)	Unacceptable	
8079	108	100	Positive	A2 (17000) B52 (3700) B64 (5600)	Positive	DR7 (2900) DQ2 (2900) DPw3 (18000) DP402 (19000)	Unacceptable	

Table 30. Individual Virtual crossmatch results for Serum #108 vs Donor# V3 - cont.

Donor #V3 HLA genotype: A*02:06-A*32:01-B*14:01-B*52:01-C*04:01:01G-C*08:02-DRB1*04:04-DRB1*07:01-DRB4*01:01:01G-DQA1*02:01-DQA1*03:01:01G-DQB1*02:02-DQB1*03:02-DPB1*03:01-DPB1*04:02

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8080	108	100	Positive	A2 (20120) B52 (6088) B64 (8010)	Positive	DR7 (4784) DQ2 (4497) DPw3 (22332) DPw4 (24310)	Unacceptable	
8083	108	99	Positive	A2 (21702) B52 (4234) B64 (6660)	Positive	DR7 (4882) DQ2 (4144) DPw3 (21275)	Unacceptable	Also A2, B52, and B64 which are expressed on B cells
8096	108		Positive	Cw4 (2618) A2 (8001) B52 (5502) A32 (1692) Cw8 (4374)	Positive	DR4 (1122) DR7 (9317) DR53 (10136) DQ2 (11461) DQ8 (1675) DPw3 (7945) DPw4 (10184) DQA1*02 (9427) DQA1*03 (10878)	Unacceptable	
8103	108	47%	Positive	A2 (5984) B52 (2025) B14 (3741) B64 (3741)	-	DR7 (1004) DQ2 (891) DPw3 (12656) DPw4 (15262) DP402 (15262)	Unacceptable	
8111	108	99	Positive	A2 (19600) B52 (4800) B64 (6800)	Positive	DR7 (3900) DQ2 (4300) DPw3 (20700) DPw4 (22900)	Unacceptable	
8117	108	100%	Positive	A2 (14006) B52 (5051) B64 (6637) Bw4 (5051)	Positive	DR7 (2747) DQ2 (2459) DPw3 (18413) DP402 (19995)	Unacceptable	

Table 31. Individual Virtual crossmatch results for Serum #108 vs Donor# V4

Donor #V4 HLA genotype: A*24:02:01-A*26:01:01-B*38:09-B*44:03:01-C*12:03:01-C*16:01:01-DRB1*04:02:01-DRB1*15:01:01-DRB4*01:03:01-DRB5*01:01:01-DQA1*01:02:01-DQA1*03:01:01-DQB1*03:02:01G-DQB1*06:02:01-DPB1*04:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
54	108	99	Positive	A24 (1426) B44 (5471) B38 (3802)	Positive	no class II DSA	Unacceptable	Positive due to Class I antibodies.
230	108	99	Positive	B44 (3778) B38 (2764) Bw4 (5000)	Positive	no class II DSA	Unacceptable	Due to Class I DSA
774	108	99	Positive	B44 (4086)	Positive	no class II DSA	Unacceptable	Crossmatch may be borderline or negative with only B44 unless the Bw4 epitope is recognized
792	108	99	Positive	B44 (2952) B38 (1812)	Positive	no class II DSA	Unacceptable	A24 (893); No Class II DSA
1461	108		Positive	B44 (2130) B38 (1324)	Positive	no class II DSA	Unacceptable	
2400	108	99%	Positive	A24 (2388) B44 (6989) B38 (5786)	Negative	no class II DSA	Unacceptable	
3224	108	99	Positive	A24 (1743) B44 (4676) B38 (3726) Bw4 (13773)	Positive	no class II DSA	Unacceptable	
3753	108	99%	Negative	B44 (3673) B38 (2359)	Negative	no class II DSA	Acceptable	No donor-specific HLA Class II antibodies were detected against this donor.
3766	108	95%	Positive	A24 (1739) B44 (4509) B38 (3740)	Negative	no class II DSA	Unacceptable	
3966	108	99	Positive	A24 (974) B44 (4277) B38 (2497)	Positive	DPw4 (21007)	Unacceptable	
4661	108	74%	Positive	B44 (4829) B38 (2852)	Positive	no class II DSA	Unacceptable	Epitope 131S
8001	108	99	Positive	A24 (1479) B44 (5803)	Positive	no class II DSA	Unacceptable	B*38:09 not in LSAB panel
8029	108	51%	Positive	B44 (4668)	Positive	DQ2 (2323) DPw4 (19517)	Unacceptable	-
8035	108	94%	Borderline	B44 (3505)	Borderline	no class II DSA	POTENTIAL POSITIVE.	MFI counts fall under our VXM limit, but no bead exists for B*38:09 and moderate antibodies were detected to B*38:01 & B*38:02. Possibility of an antibody to Bw4 (DSA), as well as no bead available for B*38:09. No Class II DSA detected.
8050	108	99	Positive	B44 (3112) B38 (1826)	Positive	no class II DSA	Unacceptable	
8079	108	100	Positive	B44 (3700)	Positive	no class II DSA	Unacceptable	The patient possesses anti-B*38:01 antibody, and the donor's B*38:09 antigen is not represented on the antibody panel.
8080	108	100	Positive	A24 (2085) B44 (5891) B38 (4121)	Positive	no class II DSA	Unacceptable	Patient demonstrates Class I reactivity

Table 31. Individual Virtual crossmatch results for Serum #108 vs Donor# V4 - cont.

Donor #V4 HLA genotype: A*24:02:01-A*26:01:01-B*38:09-B*44:03:01-C*12:03:01-C*16:01:01-DRB1*04:02:01-DRB1*15:01:01-DRB4*01:03:01-DRB5*01:01:01-DQA1*01:02:01-DQA1*03:01:01-DQB1*03:02:01G-DQB1*06:02:01-DPB1*04:01:01

Ctr	Patient	% CPRA	Virtual T Cell Prediction	Class IDSA (MFI)	Virtual B-cell prediction	Class II DSA(MFI)	Risk Assessment	Comments
8083	108	99	NT		NT		Needs physical crossmatch	Needs physical crossmatch as B*38:09 antibody cannot be detected. Due to possibility of B*38:09 which is expressed on B cells.
8096	108		Positive	A24 (2429) B44 (4137) A26 (2209) Cw12 (1525) Cw16 (3625)	Positive	DR4 (10122) DR15 (1960) DR51 (7917) DR53 (10136) DQ8 (1675) DPw4 (10184) DQ6 (2440) DQA1*01 (10538) DQA1*03 (10878)	Unacceptable	
8103	108	47	Positive	B44 (3318) B38 (1595)	Negative	no class II DSA	Unacceptable	
8111	108	99	Positive	A24 (1800) B44 (4700)	Positive	no class II DSA	Unacceptable	
8117	108	100%	Positive	A24 (1263) B44 (5132) B38 (3940) Bw4 (5132)	Positive	no class II DSA	Unacceptable	

Table 32: Individual Cutoff values and Sera Pretreatment - Exchange 18

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera Pretreatment
54	A	1500	DRB1	1500	One Lambda	EDTA
	B	1500	DRB3/4/5	1500		
	C	1500	DQA1	1500		
	Class I	1500	DQB1	1500		
			DPB1	1500		
			Class II	1500		
230	A	2000	DRB1	2000	One Lambda	None
	B	2000	DRB3/4/5	2000		
	C	2000	DQA1	2000		
	Class I		DQB1	2000		
			DPB1	10000		
			Class II			
774	A	2000	DRB1	2000	One Lambda	DTT
	B	2000	DRB3/4/5	2000		
	C	5000	DQA1	2000		
	Class I	2000	DQB1	2000		
			DPB1	5000		
			Class II	2000		
792	A	1500	DRB1	1500	One Lambda	None
	B	1500	DRB3/4/5	1500		
	C	1500	DQA1	1500		
	Class I	1500	DQB1	1500		
			DPB1	1500		
			Class II	1500		
1160	A		DRB1		One Lambda	EDTA
	B		DRB3/4/5			
	C		DQA1			
	Class I	2000	DQB1			
			DPB1			
			Class II	2000		
Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera Pretreatment
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	None
	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		
	A	1000	DPB1	2000		
			Class II	1000		
3766	A	1500	DRB1	1500	One Lambda	None
	B	1500	DRB3/4/5	1500		
	C	1500	DQA1	1500		
	Class I	1500	DQB1	1500		
			DPB1	1500		
			Class II	1500		
4661	A	750	DRB1	750	Lifecodes	None
	B	750	DRB3/4/5	750		
	C	750	DQA1	2400		
	Class I	750	DQB1	2400		
			DPB1	750		
			Class II	750		

Table 32: Individual Cutoff values and Sera Pretreatment - Exchange 18

Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera Pretreatment	Ctr	Locus	Pos Cutoff Value	Locus	Pos Cutoff Value	Manufacturer	Sera Pretreatment
8001	A		DRB1		One Lambda	FBS	8083	A		DRB1		One Lambda	EDTA
	B		DRB3/4/5					B		DRB3/4/5			
	C		DQA1					C		DQA1			
	Class I	1000	DQB1					Class I	2000	DQB1			
			DPB1							DPB1			
			Class II	1000						Class II	2000		
8029	A	500	DRB1	500	Lifecodes	None	8096	A		DRB1		One Lambda	None
	B	500	DRB3/4/5	500				B		DRB3/4/5			
	C	500	DQA1	500				C		DQA1			
	Class I	500	DQB1	500				Class I		DQB1			
			DPB1	500						DPB1			
			Class II	500						Class II			
8035	A	700	DRB1	700	One Lambda	DTT, FCS	8103	A	78	DRB1	94	Lifecodes	None
	B	700	DRB3/4/5	700				B	58	DRB3/4/5	94		
	C	700	DQA1	700				C	113	DQA1	125		
	Class I		DQB1	700				Class I		DQB1	125		
			DPB1	700						DPB1	91		
			Class II							Class II	142		
8050	A	1000	DRB1	1000	One Lambda	DTT	8117	A		DRB1		One Lambda	EDTA
	B	1000	DRB3/4/5	1000				B		DRB3/4/5			
	C	1000	DQA1	1000				C		DQA1			
	Class I	1000	DQB1	1000				Class I	1000	DQB1			
			DPB1	1000						DPB1			
			Class II	1000						Class II	1000		
8079	A	2000	DRB1	2000	One Lambda	None							
	B	2000	DRB3/4/5	2000									
	C	2000	DQA1	2000									
	Class I	2000	DQB1	2000									
			DPB1	2000									
			Class II	2000									